

## **Table of Contents**

Nano Nest for Parallel Synthesis
Aluminum Reaction Blocks
for Micro Vial (50μL) Glass Inserts, Photoredox, 24-Well
for Micro Vial (50μL) Glass Inserts, Photoredox, 96-Well
for Standard (1mL) Glass Inserts, Photoredox, 24-Well
for Standard (1mL) Glass Inserts, Photoredox, 96-Well
for Standard (1mL) Glass Inserts, Parallel Synthesis, 24-Well
for Standard (1mL) Glass Inserts, Parallel Synthesis, 96-Well
for HPLC (2mL) Vials, 48-Well
Accessories for 48-Well Aluminum Reaction Blocks
for 1 DRAM (4mL) Vials, 24-Well with 18mm Well Spacing
for 1 DRAM (4mL) Vials, 24-Well
for 2 DRAM (8mL) Vials, 24-Well
HTe <sup>-</sup> Chem Electrochemistry Assemblies
Vial Trays and Loaders for Reaction Blocks
Powder Transfer Plates
HTE Kits
Accessories
EquaVAP Blowdown Evaporators18
Thermal Transfer Deck
Lumidox Gen II
Lumidox Gen II - 96-Position LED Arrays
•
Lumidox Gen II - Discovery LED Arrays
Flow Reactor
Lumidox Controller
Lumidox Gen II - LumLamp
Accessories
Collection Plates & Cap Mats
Tillet Flates

## **Ordering Information**

#### You can order by:

- Phone: 973-616-0700
- Fax: 973-616-0133
- Email: orders@analytical-sales.com
- Online store: www.analytical-sales.com

#### **Terms of Payment**

If you have an account with Analytical Sales, we will bill you for your purchases. All prices are F.O.B. Flanders, NJ. Terms of payment are net 30 days. To open an account, please call us. We also accept Visa\*, Mastercard® and American Express®.

#### Pricing

All prices are subject to change without notice.







#### Para-dox® Aluminum Reaction Blocks

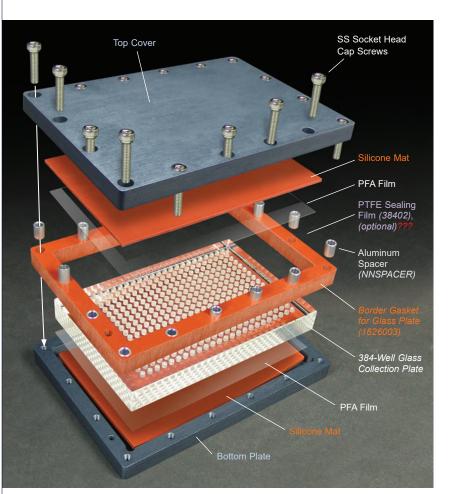
Our comprehensive line of Photoredox Catalysis and Parallel Synthesis reaction blocks are exactly what you need for successful high-throughput reaction screening. Designed specifically for high-throughput screening (HTS) applications, the SBS (SLAS/ANSI) format allows for use in any industry standard automation application.

- For photoredox and parallel synthesis applications
- Useful for generating compound arrays (medicinal chemistry)
- Useful for conducting screening reaction conditions
- Can easily be used in a glovebox
- Less than 5% solvent loss with prolonged heating

### **NEW!** HTe-Chem Electrochemistry

Analytical Sales' new **HTe<sup>-</sup>Chem** line of products allows you to accelerate your electrochemistry workflow. Run multiple simultaneous constant current, constant voltage, and/or electrophotochemical experiments. See page 13.

- For electrochemical reactions such as electrosynthesis, organic electrochemistry, electrophotochemistry, etc.
- Two optimized setups constant current or constant voltage
- Standard 24-well Para-dox® minirack platform



### **Nano Nest for Parallel Synthesis Using Glass Collection Plates**

#### Components

Cat. No.	Description	Qty
1626100	Nano Nest for Parallel Synthesis - Complete System	Each
1626001	Closed Bottom Plate For Nano Nest	Each
1626007	Open Bottom Plate for Nano Nest (96 open holes) - in development	Each
1626002	Top Cover for Nano Nest	Each
1626003	Border Gasket for Glass 384-Well Plate for use with Nano Nest	Each

#### **Consumable Replacement Parts**

Description

Cat. No.	Description	Qty
1626005	Top Silicone Mat for Nano Nest	25
1626004	Bottom Silicone Mat for Closed Bottom Nano Nest	25
1626012	Top PFA Film for Closed Bottom Nano Nest	25
1626006	Bottom PFA Film for Closed Bottom Nano Nest	25
	Bottom Silicone Mat for Open Bottom Nano Nest - in development	25
	Bottom PFA Film for Open Bottom Nano Nest - in development	25
NNSCREW	SS Socket Head Cap Screws for Nano Nest	100
NNSPACER	Aluminum Unthreaded Spacer for Nano Nest	32

#### **Suggested Compatible Well Plates**

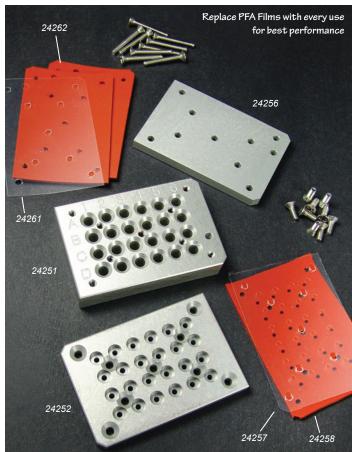
Cat. No.	Description	Qty
38499	384-Well Glass Microplate, 24µL Volume/Well	Each
38498	384-Well Glass Microplate, 74µL Volume/Well	Each



- Validated to have less than 5% solvent loss with prolonged heating above boiling point
- Temperature range -78°C 150°C
- Quality Stirring with Tumble Stirring
- Silicone Rubber Mats provide compression sealing
- Teflon® PFA Films keep the glass reaction vials from sticking to the silicone rubber mats during heating

## **Photoredox Catalysis Reaction Blocks**





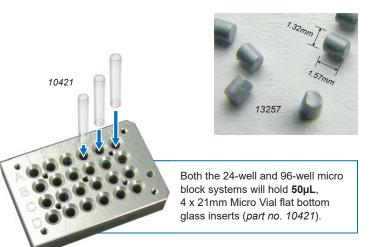
## 24-Well Photoredox Catalysis Aluminum Reaction Block for Micro Vial Glass Inserts (50µL, 4x21mm)

• 4x21mm flat-bottom glass micro vials, **50µL** volume (25µL maximum volume if using tumble stir bars)

Cat. No.	Description	Qty
24250	Photoredox 24-Well Micro Block Assembly Includes Vial Rack, Bottom and Top Covers, PFA Sheets, Rubber Mats and Screws	Each
24251	24-Well Vial Rack for Photoredox Micro	Each
24252	Bottom Plate for Photoredox Micro	Each
24257	Bottom PFA Films	25
24258	Bottom Rubber Mats	25
24256	Top Cover for 24-Well Photoredox Micro	Each
24261	Top PFA Films for 24-Well Photoredox Micro	25
24262	Top Rubber Mats for 24-Well Photoredox Micro	25
1/2"SCREW96	1/2" Bottom Screws	100
1"SCREW	1" Bottom Screws	100

#### **Accessories**

Cat. No.	Description	Qty
10421-Case	Micro Vials - 50µL Flat Bottom Glass Inserts, 4x21mm	1000
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
24245	Rack Adapter	Each









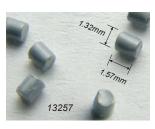
# 96-Well Photoredox Catalysis Aluminum Reaction Block for Micro Vial Glass Inserts (50µL, 4x21mm)

• 4x21mm flat-bottom glass micro vials, **50μL** volume (25μL maximum volume if using tumble stir bars)

Cat. No.	Description	Qty
96970	Photoredox 96-Well Micro Block Assembly Includes Vial Rack, Bottom and Top Covers, PFA Sheets, Rubber Mats and Screws	Each
96971	96-Well Vial Rack for Photoredox Micro	Each
96972	Bottom Plate for Photoredox Micro	Each
96977	Bottom PFA Films	25
96978	Bottom Rubber Mats	25
96976	Top Cover for 96-Well Photoredox Micro	Each
96981	Top PFA Films for 96-Well Photoredox Micro	25
96982	Top Rubber Mats for 96-Well Photoredox Micro	25
1/2"SCREW96	1/2" Bottom Screws	100
1"SCREW	1" Top Screws	100







#### **Accessories**

Cat. No.	Description	Qty
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
SD1000	Milwaukee M4 1/4in. Hex Screwdriver Kit Includes 2 Batteries and Charger (Note: batteries not available for international shipping)	Each



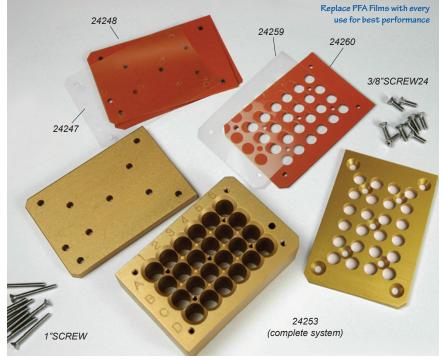


- Validated to have less than 5% solvent loss with prolonged heating above boiling point
- Temperature range -78°C 150°C
- Quality Stirring with Tumble Stirring
- Silicone Rubber Mats provide compression sealing
- Teflon® PFA Films keep the glass reaction vials from sticking to the silicone rubber mats during heating

## **Photoredox Catalysis Reaction Blocks**







	/			
24245				
	dapter (Op	tional)		

Cat. No.	Description	Qty
24253	Photoredox 24-Well Block Assembly - Includes Vial Rack, Top Cover, Bottom Cover, PFA Films, Rubber Mats, Screws	Each
24247	Replacement Top Films for 24 Position, Photoredox Block	25
24248	Replacement Top Mats for 24 Position, Photoredox Block	25
24259	Replacement Bottom Films for 24 Position, Photoredox Block	25
24260	Replacement Bottom Mats for 24 Position, Photoredox Block	25
3/8"SCREW24	3/8" Bottom Screws	100
1"SCREW	1" Top Screws	100
24245	Rack Adapter, Optional	Each



SD1000

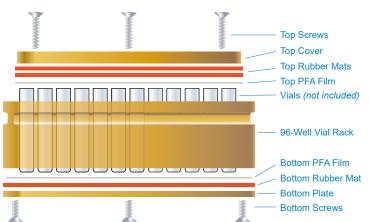
Battery Powered Screwdriver
(see our website for proper screw pattern)

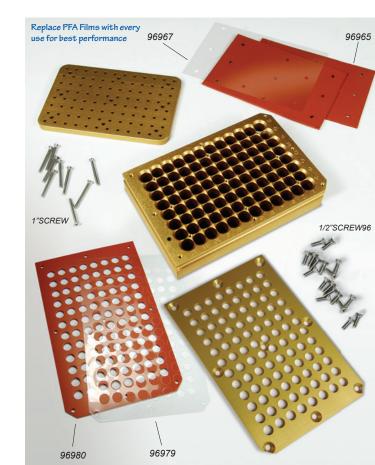
#### Accessories

	_	
Cat. No.	Description	Qty
84001-Case	1mL Clear Glass Shell Vials, 8 x 30mm	1000
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
SD1000	Milwaukee M4 1/4in. Hex Screwdriver Kit. Includes 2 Batteries and Charger (Note: batteries not available for international shipping)	Each





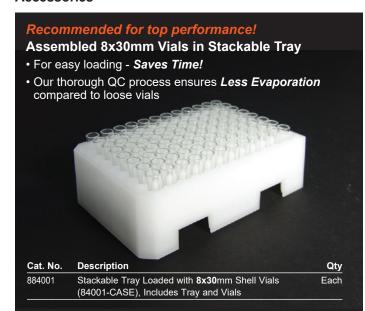




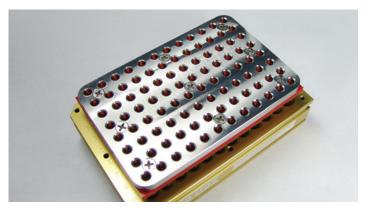
# 96-Well Photoredox Catalysis Aluminum Reaction Block for Standard Glass Inserts (1mL, 8x30mm)

Cat. No.	Description	Qty
96973	Photoredox 96-Well Block Assembly	Each
	Includes: Vial Rack, Covers, Mats, Films and Screws	
96967	Replacement Top Films for 96-Well Photoredox Block	25
96965	Replacement Top Mats for 96-Well Photoredox Block	25
96979	Replacement Bottom Films for 96-Well Photoredox Block	25
96980	Replacement Bottom Mats for 96-Well Photoredox Block	25
1/2"SCREW96	1/2" Bottom Screws	100
1"SCREW	1" Top Screws	100

#### **Accessories**



Cat. No.	Description	Qty
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
SD1000	Milwaukee M4 1/4in. Hex Screwdriver Kit, includes 2 Batteries and Charger (Note: batteries not available for international shipping)	Each



#### Top Cover with Wider Holes for 96-Well Reaction Blocks

- Enlarged (4.3mm) Holes for Automated Sampling Instruments
- 316 Stainless Steel

Cat. No.	Description	Qty
96985	Reaction Block Cover with Enlarged Holes, 6mm Thickness	Ea
96986	Reaction Block Cover with Enlarged Holes, 3mm Thickness	Ea



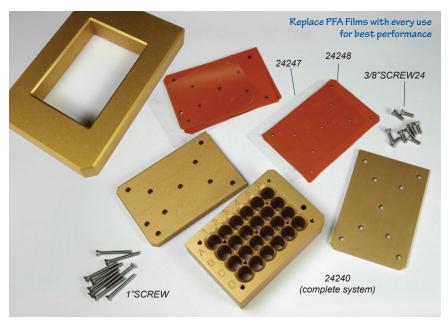
- Validated to have less than 5% solvent loss with prolonged heating above boiling point
- Temperature range -78°C 150°C
- Quality Stirring with Tumble Stirring
- Silicone Rubber Mats provide compression sealing
- Teflon® PFA Films keep the glass reaction vials from sticking to the silicone rubber mats during heating

## Parallel Synthesis Reaction Blocks for Optimization of Chemical Processes

Tech Note: Parallel Synthesis Reaction Blocks are ideal for the optimization of chemical processes and screening for optimal reaction conditions.



## **24-Well Parallel Synthesis** Aluminum Reaction Block for Standard Glass Inserts (1mL, 8x30mm)





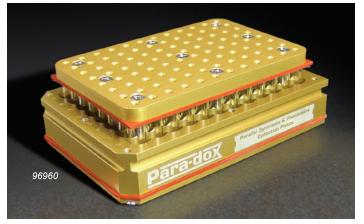
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SD1000 Battery Powered Screwdriver (see our website for proper screw pattern)	

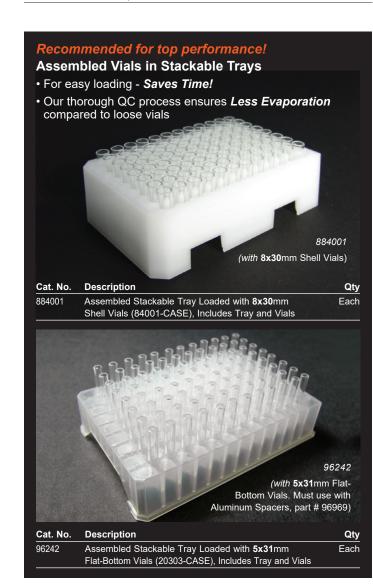
Cat. No.	Description	Qty
24240	Parallel Synthesis 24-Well Block Assembly Includes Vial Rack, Top Cover, Bottom Cover, PFA Films, Rubber Mats, Screws and Rack Adapter	Each
24249	Parallel Synthesis/Optimization 24-Well Block Assembly, no Rack Adapter	Each
24245	Rack Adapter	Each
24247	Replacement Films for 24 Position, Optimization Block	25
24248	Replacement Mats for 24 Position, Optimization Block	25
3/8"SCREW24	3/8" Bottom Screws	100
1"SCREW	1" Top Screws	100

#### **Accessories for 24-Well Parallel Synthesis Blocks**

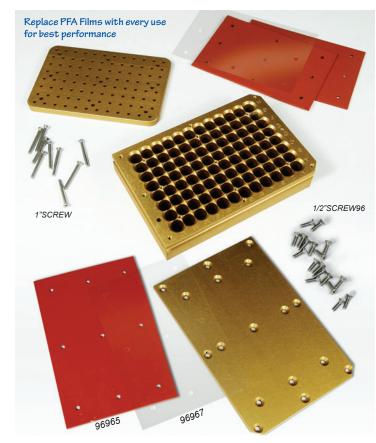
Cat. No.	Description	Qty
84001-Case	1mL Clear Glass Shell Vials, 8 x 30mm	1000
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
SD1000	Milwaukee M4 1/4in. Hex Screwdriver Kit. Includes 2 Batteries and Charger (Note: batteries not available for international shipping)	Each



Cat. No.	Description	Qty
96960	Parallel Synthesis 96-Well Block Assembly Includes Vial Rack, Top and Bottom Covers, PFA Films, Rubber Mats and Screws	Each
96967	Replacement Films for 96-Well Optimization Block	25
96965	Replacement Mats for 96-Well Optimization Block	25
1/2"SCREW96	1/2" Bottom Screws	100
1"SCREW	1" Top Screws	100



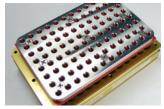
# 96-Well Parallel Synthesis Aluminum Reaction Block for Standard Glass Inserts (1mL, 8x30mm)





#### Accessories

Cat. No.	Description	Qty
884001	Assembled Tray with 8 x 30mm Shell Vials	Each
96969	Anodized Aluminum Spacers for 5 x 31mm Inserts	96
13257	Magnetic Tumble Stir Bars, 1.32mm x 1.57mm	1000
SD1000	Milwaukee M4 1/4in. Hex Screwdriver Kit, includes 2 Batteries and Charger (Note: batteries not available for international shipping)	Each

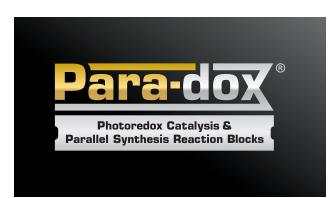


## Top Cover with Wider Holes for 96-Well Reaction Blocks

- Enlarged (4.3mm) Holes
- 316 Stainless Steel
- Made for Automated Sampling Instruments

Cat. No.	Description	Qty
6985	Reaction Block Cover with Enlarged Holes, 6mm Thickness	Each
6986	Reaction Block Cover with Enlarged Holes, 3mm Thickness	Each

## **Accessories for 48-Well Aluminum Reaction Blocks**



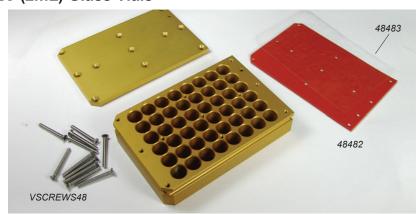
#### **48-Well Aluminum Reaction Blocks**

- Useful for generating compound arrays (medicinal chemistry)
- Useful for conducting screening reaction conditions
- SBS plate format allows for use in multiple automation applications
- Can be used on tumble stirrers / hot plate stirrers / robotic platforms
- Can easily be used in a glovebox
- Sealed with/ PFA Film and Rubber Mats

## **Parallel Synthesis for Optimization of Chemical Processes**

48-Well Aluminum Reaction Block for HPLC (2mL) Glass Vials

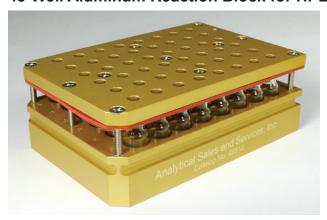


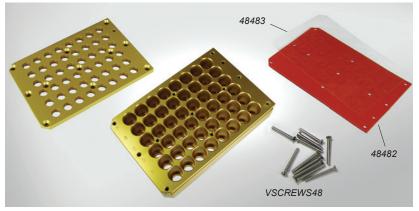


Cat. No.	Description	Qty
48012	48-Well Aluminum Reaction Block for 12mm (2mL) OD Vials. Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
48482	Rubber Mats for 48 Well (12mm OD) Reaction Blocks	25
48483	PFA films for 48 Well (12mm OD) Reaction Blocks	25
VSCREW48	1 1/4" Screws for 48-Well Aluminum Reaction Plate	100

## **Photoredox Catalysis**

#### 48-Well Aluminum Reaction Block for HPLC 2mL Glass Vials - Open Top/Open Bottom (for Sampling)

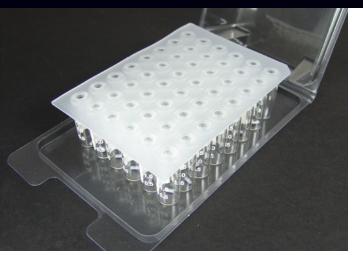






Use with 12 x 32mm vials, sold separately. See part number 11211-Case on next page

Cat. No.	Description	Qty
48612	48-Well Open Top/Open Bottom Aluminum Reaction Block for 12mm (2mL) OD Vials.	Each
	Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	
48482	Rubber Mats for 48 Well (12mm OD) Reaction Blocks	25
48483	PFA films for 48 Well (12mm OD) Reaction Blocks	25
VSCREW48	1 1/4" Screws for 48-Well Aluminum Reaction Plate	100



48-Well Vial Tray with Numbered Crimp Vials

Cat. No.	Description	Qty
48221M	Assembled 48-Well Vial Tray with <b>Numbered</b> Crimp Vials. Includes: Vials (11221M) Marked 1-48; Stir Bar (13258) in Each Vial; 48-Well Cap Mat (99948); Vial Tray (48501)	Each



Cap Mat for HPLC (2mL) Vials in 48-Well Block

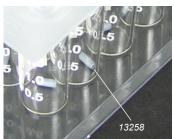
Description	Qty
Clear Silicone/PTFE Cap Mat for HPC Vials in 48-Position Aluminum Reaction Block	5
	Clear Silicone/PTFE Cap Mat for HPC Vials in



12 x 32 Wide Mouth Glass Vials for 48-Well Blocks

Cat. No.	Description	Qty
11211-Case	11mm, 12 x 32, 2mL Wide Mouth Glass Crimp/Snap Vials	1000
11221-Case	11mm, 12 x 32, 2mL Wide Mouth Glass Crimp Vials	1000
11221M-Case	11mm, 12 x 32, 2mL Wide Mouth Glass <b>Crimp</b> Vials with Marking Spot	1000





#### Stainless Steel Cylinder Stir Bars for 2mL HPLC Vials

- Parylene Encapsulated
- For Photoredox and Parallel Synthesis Aluminum Block Systems

Cat. No.	Description	Qty
3258	Stainless Steel Cylinder Stir Bars,	1000
	1.98mm x 4.80mm, for 2mL HPLC Vials	



#### **24-Well Aluminum Reaction Blocks**

- Useful for generating compound arrays (medicinal chemistry)
- Useful for conducting screening reaction conditions
- SBS plate format allows for use in multiple automation applications
- Can be used on tumble stirrers / hot plate stirrers / robotic platforms
- Can easily be used in a glovebox
- Sealed with/ PFA Film and Rubber Mats

#### **Photoredox Catalysis**

24-Well Aluminum Reaction Block with 18mm Well Spacing

for 1 Dram Vials (4mL, 15x45mm) - Open Top/Bottom (for Sampling)







Use with 15 x 45mm vials, sold separately. See part number 31531-Case.



Cat. No.	Description	Qty
24626	24-Well Aluminum Reaction Block with 18mm spacing between well centers. For 15mm OD (1 Dram) Vials. Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
24120	Silicone/Rubber Mats for 24 Well, 18mm Spacing Reaction Blocks	25
24121	PFA Films for 24 Well, 18mm Spacing Reaction Blocks	25
VSCREW24	1 3/4" Screws for 24-Well Aluminum Reaction Plate	100

Cat. No.	Description	Qty
31531-Case	Advantage 13mm, 15 x 45, 4mL Clear Glass Screw Vials, Case	1000
31554-Case	PTFE Lined Cap	1000

Built specifically for use with our Lumidox® II 24-well, 18mm spaced Lens Mat Array

See page 27 for more information





## **Parallel Synthesis for Optimization of Chemical Processes**

24-Well Aluminum Reaction Block for 1 Dram Vials (4mL, 15x45mm) - fits on Mettlers QX96



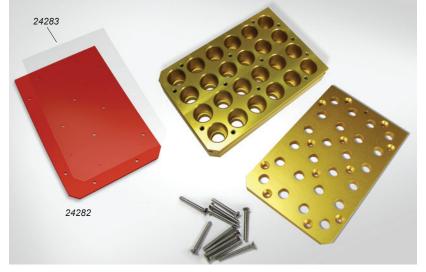


Cat. No.	Description	Qty
24015	24-Well Aluminum Reaction Block for 15mm OD (1 Dram) Vials, Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
24282	High-Temp Silicone/Rubber Cover for 24-Well Reaction Blocks for Vials	25
24283	PFA Film (0.005" Thick) for 24-Well Reaction Blocks for Vials	25
VSCREW24	1 3/4" Screws for 24-Well Aluminum Reaction Plate	100

#### **Photoredox Catalysis**

24-Well Aluminum Reaction Block for 1 Dram Vials (4mL, 15x45mm) - Open Top/Bottom (for Sampling)







Use with 15 x 45mm vials, sold separately. See part number 31531-Case.



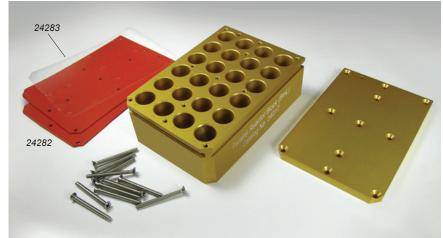
Cat. No.	Description	Qty
24615	24-Well, Open Top/Open Bottom Aluminum Reaction Block for 15mm OD (1 Dram) Vials, Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
24282	High-Temp Silicone/Rubber Cover for 24-Well Reaction Blocks for Vials	25
24283	PFA Film (0.005" Thick) for 24-Well Reaction Blocks for Vials	25
VSCREW24	1 3/4" Screws for 24-Well Aluminum Reaction Plate	100

Cat. No.	Description	Qty
31531-Case	Advantage 13mm, 15 x 45, 4mL Clear Glass Screw Vials, Case	1000
31554-Case	PTFE Lined Cap	1000

#### **Parallel Synthesis for Optimization of Chemical Processes**

24-Well Aluminum Reaction Block for 2 Dram Vials (8mL, 17x60mm)

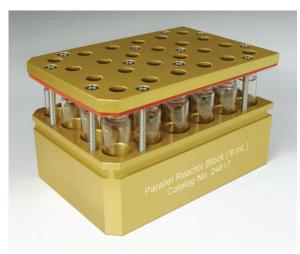




Cat. No.	Description	Qty
24017	24-Well Aluminum Reaction Block for 17mm OD (2 Dram) Vials, Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
24282	High-Temp Silicone/Rubber Cover for 24-Well Reaction Blocks for Vials	25
24283	PFA Film (0.005" Thick) for 24-Well Reaction Blocks for Vials	25
VSCREW24	1 3/4" Screws for 24-Well Aluminum Reaction Plate	100

#### **Photoredox Catalysis**

24-Well Aluminum Reaction Block for 2 Dram Vials (8mL, 17x60mm) - Open Top/Bottom (for Sampling)







Use with 17 x 60mm vials. sold separately. See part number 31760-Case.



Cat. No.	Description	Qty
24617	24-Well, <b>Open Top/Open Bottom</b> Aluminum Reaction Block for 17mm OD (2 Dram) Vials, Includes: Base Plate, Cover, Screws, PFA Film and 2 Rubber Mats	Each
24282	High-Temp Silicone/Rubber Cover for 24-Well Reaction Blocks for Vials	25
24283	PFA Film (0.005" Thick) for 24-Well Reaction Blocks for Vials	25
VSCREW24	1 3/4" Screws for 24-Well Aluminum Reaction Plate	100

Cat. No.	Description	Qty
31760-Case	Advantage 17 x 60mm, 8mL Clear Glass Screw Vials, Case	1000
31542-CASE	15mm Solid Black Polypropylene Screw Caps with PTFE/F217 Liners	1000
31543-CASE	Black Open Top PP Cap with PTFE/Silicone (0.065") Septa, 15-425mm Thread	1000







#### **HTe-Chem Electrochemistry Assemblies**

Analytical Sales' new **HTe<sup>-</sup>Chem** line of products allows for broad electrochemical reactions (such as electrosynthesis, organic electrochemistry, electrophotochemistry, etc.) to be carried out on Analytical Sales standard 24-well minirack platform. HTe<sup>-</sup>Chem allows you to accelerate your electrochemistry workflow by permitting multiple simultaneous constant current, constant voltage, and/or electrophotochemical experiments to be run.

There are two optimized setups to choose from:

The **constant current** setup allows the user to set a precise current, which will be maintained by the power supply throughout the reaction. The voltage will automatically be varied based on the changing electrical conditions as the reaction progresses.

The **constant voltage** setup allows the user to set a precise voltage, which will be maintained by the power supply throughout the reaction. In this setup, the current will automatically be varied based on the changing electrical conditions as the reaction progresses.

#### HTe<sup>-</sup>Chem Assemblies & Kits

Cat. No.	Description	Qty
700100	Constant Current Electrochemistry Assembly	Each
700150	Constant Current Electrochemistry Kit (Includes Electrode Kit)	Each
700200	Constant Voltage Electrochemistry Assembly	Each
700250	Constant Voltage Electrochemistry Kit (Includes Electrode)	Each

#### Electrodes for HTe<sup>-</sup>Chem Assemblies

Analytical Sales offers a myriad of electrode choices which can be used as either cathodes or anodes depending on your experimental needs.

Cat. No.	Description	Qty
700500	Graphite Electrodes	30
700550	Tin Electrodes	25
700600	Zinc Electrodes	25
700700	Stainless Steel Electrodes	25
700750	Nickel Electrodes	25
700800	NiChrom Electrodes	25
700850	Copper Electrodes	25
700900	Aluminum Electrodes	25
700950	Magnesium Electrodes	25
700400	Electrode Kit. Includes One Pack of Each of Graphite, Zinc, Stainless Steel, Nickel, NiChrom, Aluminum, Copper and Magnesium Electrodes	Each

Platinum electrodes are available - call for details

## **Power Supply and Accessories**

Cat. No.	t. No. Description	
700050	Calibrated DC Power Supply, 4 Output Multi Range, 420W Combined Output	Each
700060	Breakout Cable Assembly, for use with Calibrated DC Power Supply	Each

For experimentation with electrophotochemical reactions, HTe<sup>-</sup>Chem assemblies are fully compatible for use with Lumidox®II 24-well 9mm spaced LED arrays. See page 27



**Vial Trays and Loaders for 96-Well Reaction Blocks Powder Transfer Plates** 

#### **Stackable Vial Trays**

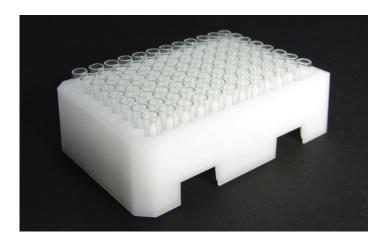
for Photoredox/Optimization Plates

- Recommended for top performance our thorough QC process ensures less evaporation compared to loose vials
- Makes loading and transferring your vials easier!



96-Well Stackable Tray Loaded with 4 x 21mm Shell Vials

Cat. No.	Description	Qty
96342	96-Well Polypropylene Tray with 4x21mm Flat Bottom Vials,	Each
	Assembled	



#### 96-Well Stackable Tray Loaded with 8 x 30mm Shell Vials

- Can be used with Powder Transfer Plate (part no. 96T105) to mix/transfer powders between vials
- Can also be used as a stand-alone collection/sampling device

Cat. No.	Description	Qty
884001	96-Well Stackable Tray Loaded with 8 x 30 Shell Vials	Each

## **Barcoded Vial Inserts in Tray for 96-Well Blocks**







#### 2D Barcoded Vial Inserts in Tray for 96-Well Blocks

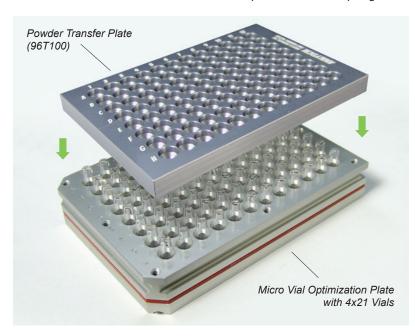
- Each 8x30 shell vial is barcoded on the bottom
- Sequentially assembled in open bottom tray
- Large viewing area

Cat. No.	Description	
9984001	Well Tray Loaded with 2D Barcoded 8x30 Shell Vials (84001-CASE).	Each
	Includes Tray and Vials	

#### Powder Transfer Plate for 4x21mm Vials

Easily dispense powder into 4x21mm (50µL) Micro Vials

- Wide funneled holes guide powder into vials
- Grooves on bottom surface "lock" vials into position to avoid spillage



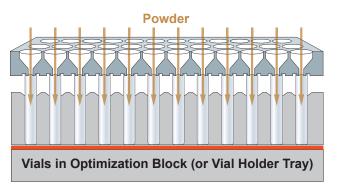
#### Use with:

- 96-Well Polypropylene Tray with 4x21mm Vials (96342)
- 4x21mm Vials (10421-Case) in 96-Well Micro Optimization Block (96970)

Cat. No.	Description	Qty
96T100	Powder Transfer Plate for 4x21 Vials	Each



- · Wide funneled holes guide powder into vials
- Grooves on bottom surface "lock" vials into position to avoid spillage



- 1. Lower plate onto vials and let the vials "settle" into the grooves on the bottom surface of transfer plate
- 2. Powder can now be easily dispensed into each vial

#### **Powder Transfer Plate for 8x30mm Vials**

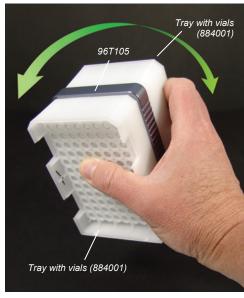
Use to transfer powder from vial to vial or to mix powders between vials





Use with 96-Well Stackable Trays with 8x30mm Vials (884001)

Cat. No.	Description	
96T105	Powder Transfer Plate for 8x30mm Vials	Each
884001	96-Well Stackable Tray Loaded with 8x30mm Shell Vials	Each



Flip repeatedly to mix powders between vials

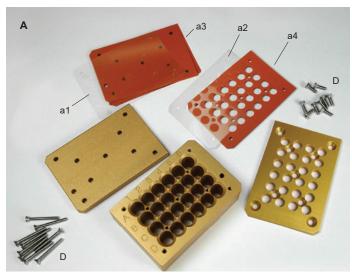
## What's your goal?

If you want to run 24 Well Screens, and you have:

- Stirrer Hotplates
- Single and/or Multichannel pipettes

1150

## HTE Kit 1 24-Well Screening Kit







#### Contains:

#### A) Four (4) 24-well Block Assemblies

- a1) 2 packs of Top PFA Film, 24-well (25/pack)
- a2) 1 pack of Bottom PFA Film, 24-well (25/pack)
- a3) 1 pack of Top Red Mats, 24-well (25/pack)
- a4) 1 pack of Bottom Red Mats, 24-well (25/pack)
- D) Spare Screws
- E) Electric Screwdriver (battery not available for international shipping)
- F) Case of 1000 1mL 8x30 Shell Vials
- I) Pack of 1000 Tumble Stir Elements

Cat. No.	Description
HTEKit1	24-Well Screening Kit

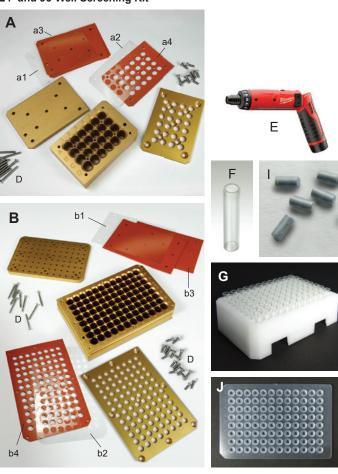
## If you want to run 24 and 96 Well Screens, and you have:

- Stirrer Hotplates
- Single and/or Multichannel pipettes
- Tumble stirrer and heating/cooling blocks
- HPLC with plate-based autosampler\*
   \* Recommended but not essential

#### use

## HTE Kit 2

24- and 96-Well Screening Kit



#### Contains:

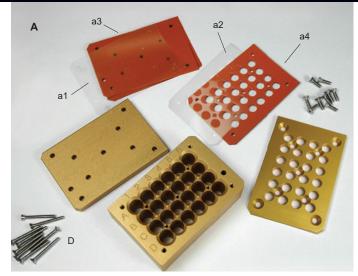
#### A) Two (2) 24-well Block Assemblies

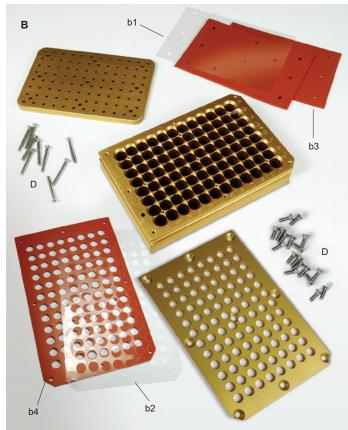
- a1) 2 packs of Top PFA Film, 24-well (25/pack)
- a2) 1 pack of Bottom PFA Film, 24-well (25/pack)
- a3) 1 pack of Top Red Mats, 24-well (25/pack)
- a4) 1 pack of Bottom Red Mats, 24-well (25/pack)

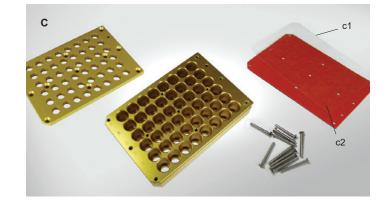
#### B) Two (2) 96-well Block Assemblies

- b1) 2 packs of Top PFA Film, 96-well (25/pack)
- b2) 1 pack of Bottom PFA Film, 96-well (25/pack)
- b3) 1 pack of Top Red Mats, 96-well (25/pack)
- b4) 1 pack of Bottom Red Mats, 96-well (25/pack)
  D) Spare Screws
- E) Electric Screwdriver (battery not available for international shipping)
- F) Case of 1000 1mL 8x30 Shell Vials
- G) 10 Stackable Trays Loaded with 8x30 Shell Vials
- I) Pack of 1000 Tumble Stir Elements
- J) 4 packs of Ultra Thin Round Well Silicone/PTFE Cap Mats, 96-well (5/pack)

Cat. No.	Description	
HTEKit2	24- and 96-Well Screening Kit	
	·	







If you want to run 24, 48 and 96 Well Screens, and you have:

- Stirrer Hotplates
- Single and/or Multichannel pipettes
- Tumble stirrer and heating/cooling blocks
- HPLC with plate-based autosampler\*
- Plate-based pressure reactor\*
- Plate centrifuging/plate filtering capability\*
   \*Recommended but not essential

use

## HTE Kit 3

24-, 48- and 96-Well Screening Kit

#### Contair

#### A) Two (2) 24-well Block Assemblies

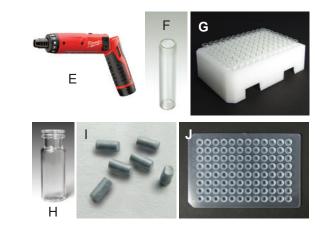
- a1) 2 packs of Top PFA Film, 24-well (25/pack)
- a2) 1 pack of Bottom PFA Film, 24-well (25/pack)
- a3) 1 pack of Top Red Mats, 24-well (25/pack)
- a4) 1 pack of Bottom Red Mats, 24-well (25/pack)

#### B) Two (2) 96-well Block Assemblies

- b1) 2 packs of Top PFA Film, 96-well (25/pack)
- b2) 1 pack of Bottom PFA Film, 96-well (25/pack)
- b3) 1 pack of Top Red Mats, 96-well (25/pack)
- b4) 1 pack of Bottom Red Mats, 96-well (25/pack)

#### C) Two (2) 48-well Block Assemblies (2mL HPLC Vials) c1) 2 packs of Top PFA Film, 48-well (25/pack)

- c2) 1 pack of Top Red Mats, 48-well (25/pack)
- D) Spare Screw
- E) Electric Screwdriver (battery not available for international shipping)
- F) Case of 1000 1mL 8x30 Shell Vials
- G) 10 Stackable Trays Loaded with 8x30 Shell Vials
- H) Case of 1000 2mL HPLC Vials
- I) Pack of 1000 Tumble Stir Elements
- J) 4 packs of Ultra Thin Round Well Silicone/PTFE Cap Mats, 96-well (5/pack)



Cat. No.	Description
HTEKit3	24-, 48- and 96-Well Screening Kit





### 96-Well EquaVAP Evaporator

 Use with 96-well Reaction Blocks with 1mL Vials or 96-well Polypropylene Collection Plates

Cat. No.	Description	Qty
23096	EquaVAP 96-Well Blowdown Evaporator	Each

#### **EVAPORATION TIMES**

Chemical	Avg Evap Time* (HH:MM:SS)	
Dichloromethane 99.9%	00:00:23	
Acetone 100%	00:02:04	
Methanol 99.9%	00:06:09	
Ethyl Acetate	00:03:04	
Acetonitrile	00:06:37	
Isopropyl Alcohol 99.0%	00:08:48	
Water (DI)	01:23:46	
Conditions: 100µL of solvent evaporated at AIR flow of 100 L/min, (using 1mL round deep well plate)		

\*Individual results may vary

## EquaVAP® 96, 48 and 24-Well Blowdown Evaporators - for Reaction Blocks

#### Rapidly evaporates common organic solvents

- Internal Flow Equalizers Distributes equal output across all needle ports to ensure even and symmetrical evaporation.
- SS Needle Tips robust, sturdy, wide solvent compatibilities
- Step-down Height Adjustment repeatable positioning
- **Stand Alone** Simple to operate, connects to Nitrogen supply with a standard socket
- Small Footprint 8" base, fits in glove boxes & fume hoods



#### 48-Well EquaVAP for 2mL HPLC Vials

• Use with 48-well Aluminum Reaction Blocks with 2mL Vials

Cat. No.	Description	Qty
23048	EquaVAP for 48-Well Reaction Blocks with 2mL vials	Each



#### 24-Well EquaVAP for 1mL Vials

- Use with 24-well optimization blocks with 9mm vial spacing
- 24-well block fits into 96-well footprint with use of rack adapter (24245)

Cat. No.	Description	Qty
23024-09	EquaVAP for 24-Well Reaction Blocks w/ 9mm Vial Spacing	Ea



#### 24-Well EquaVAP for 1 Dram and 2 Dram HPLC Vials

- 20mm center-to-center needle distance
- Use with 24-well Aluminum Reaction Blocks with 1 or 2 Dram vials

Cat. No.	Description	Qty
23024-20	EquaVAP for 24-Well Reaction Blocks w/ 20mm Spacing	Ea







Use a Thermal Transfer Deck to transfer heat or cold directly to your reaction block samples



Attach a Thermal Transfer Deck to a Lumidox® II solid base LED array for direct cooling of the array



Link together multiple TTD+ units, multiple Flow Reactors, or multiple TTD+'s and Flow Reactors together with our Daisy-Chain Connector.

#### Thermal Transfer Decks (TTD, TTD+)

- Must be used with a recirculating liquid chiller or heater
- Can be attached to a Lumidox® II solid base LED arrays for direct cooling of the array
- SLAS conformity

When connected to an external recirculating liquid chiller, our Thermal Transfer Deck can be used as either a chilling plate or hot plate. Apply heat or cold directly to your samples or sample vessels (such as Para-dox® Reaction Blocks), or use it to cool your Lumidox® II solid base LED array. The TTD is compatible with a wide variety of coolants such as water, propylene glycol, ethylene glycol, oil, etc..

This aluminum Thermal Transfer Deck conforms to SLAS dimensions and fits perfectly with a variety of Analytical Sales' collection plates and Thermal Adapter Plates. It has four (4) 3mm mounting holes which allow for attachment to solid base Lumidox II Arrays as well.

These decks are stackable, and multiple decks can be chained together for a total temperature control solution. The Input and Output ports are user configurable, and may be relocated between side and top faces. Push-to-connect fittings come standard and allow for quick tubing insertion/removal. The Thermal Transfer Deck is also available with **high-end valved fittings (TTD+)** for easy, spill-proof tubing connection/disconnection.

#### Compatible apparatus:

- All Lumidox® II solid base LED arrays
- Thermal Adapter Plates for warm/cool transfer to polypropylene collection plates (part #'s 967720TAP and 59623-23TAP)

Cat. No.	Description	Qty
266540	(TTD+) SLAS Thermal Transfer Deck with High-end, Spill-proof Fittings	Each
266701	Daisy-Chain Connector for TTD+ and Flow Reactor (see page 28)	Each
266530	(TTD) SLAS Thermal Transfer Deck with Standard Fittings	Each

#### Recommended chiller:

Cat. No.	Description	Qty
TCube Edge	TCube Edge Chiller	Each









# Lumidox®

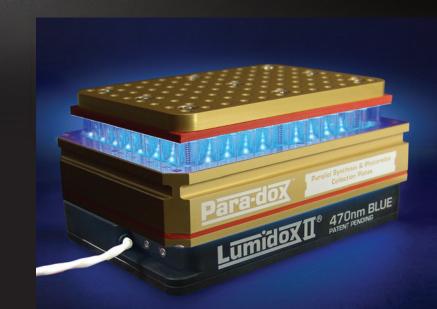
## **Photon Generation Devices**

## For Photoredox Catalysis Applications

### What Took Hours, Now Takes Minutes!

Taking advantage of recent breakthroughs in LED technology, Analytical Sales & Services is able to offer the next generation Lumidox II with higher optical/radiometric power than ever before. Lumidox II offers over 200 unique and complementing photonic devices, in varying wavelengths, amplitudes and footprints. What took hours, now takes minutes. Reduce photochemical reaction time up to 40x while maintaining the same yield.

The Lumidox II collection includes new LED Arrays with a wider range of wavelengths to choose from, as well as options for top surfaces and bases. Also, check out our new LumLamp for experimental applications. All of our Lumidox II Illumination devices are controlled by the Lumidox II controller.



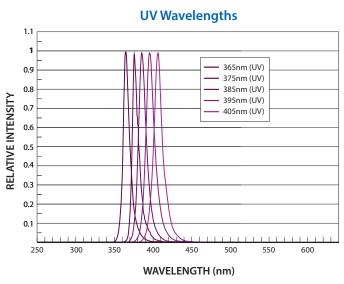


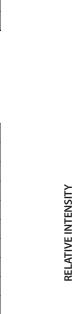
Lumidox II 96-Position Arrays - colors shown are simulated and may differ slightly from actual output. Protective UV goggles should always be worn when in use.

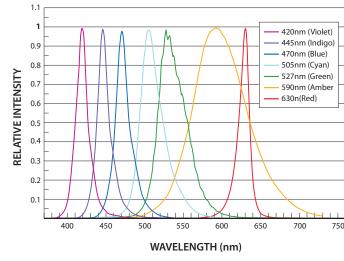
#### Lumidox® II 96-Well LED Arrays are available in the following wavelengths:

365 (UV365)	405 (UV405)	505 (Cyan)	660 (Deep Red)
375 (UV375)	420 (Violet)	527 (Green)	730-IR (Infrared)
385 (UV385)	445 (Indigo)	590 (Amber)	White
395 (UV395)	470 (Blue)	630 (Red)	

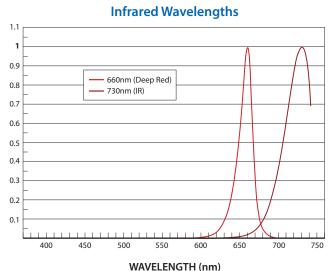
#### **Typical Spectral Characterization**

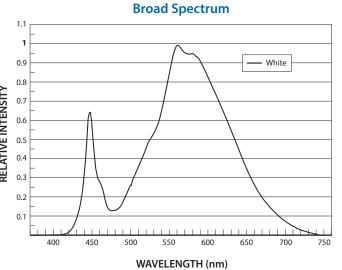






**Visible Wavelengths** 







#### **Lumidox® II STAGE Selection**

By default, all Lumidox II devices are factory calibrated with 5 discrete linearly stepped output STAGES (Example 1, at right). STAGE 1 output is the least radiometric power while STAGE 5 output is the most. STAGES are calibrated to nearest whole number of radiant flux, and displayed in milliwatts (mW).

Analytical Sales & Services offers custom tuned stages to meet specific and unique requirements. A user, for example, may require an instrument tuned for maximum light output (Example 2). In another example, a user may have a need for a tighter resolution of STAGES (Example 3).

## 96-Position LED Arrays with Lens Mat and Active Cooling Base

Radiant Flux Values per STAGE - Example (typical values)

		Stage 1 Ra	adiant Flux	Stage 2 Ra	adiant Flux	Stage 3 Ra	adiant Flux	Stage 4 Ra	adiant Flux	Stage 5 Ra	adiant Flux
Catalog No.	Wavelength	Per well (mW)	Total (W)	Per well (mW)	Total (W)						
LUM296LA365	UV365	25	2.4	55	5.3	80	7.7	105	10.1	135	13.0
LUM296LA375	UV375	25	2.4	50	4.8	75	7.2	110	10.6	140	13.4
LUM296LA385	UV385	30	2.9	65	6.2	100	9.6	145	13.9	165	15.8
LUM296LA395	UV395	30	2.9	65	6.2	105	10.1	140	13.4	170	16.3
LUM296LA405	UV405	25	2.4	60	5.8	90	8.6	125	12	160	15.4
LUM296LA420	420-Violet	30	2.9	60	5.8	90	8.6	120	11.5	150	14.4
LUM296LA445	445-Indigo	50	4.8	100	9.6	150	14.4	195	18.7	240	23.0
LUM296LA470	470-Blue	45	4.3	95	9.1	140	13.4	180	17.3	220	21.1
LUM296LA505	505-Cyan	35	3.4	65	6.2	90	8.6	115	11.0	135	13.0
LUM296LA527	527-Green	25	2.4	55	5.3	80	7.7	100	9.6	110	10.6
LUM296LA590	590-Amber	40	3.8	75	7.2	115	11.0	150	14.4	180	17.3
LUM296LA630	630-Red	30	2.9	55	5.3	85	8.2	115	11.0	145	13.9
LUM296LA660	660-Deep Red	40	3.8	70	6.7	105	10.1	140	13.4	170	16.3
LUM296LA730	IR730	35	3.4	65	6.2	95	9.1	125	12.0	155	14.9
LUM296LAWHT	White	50	4.8	100	9.6	150	14.4	200	19.2	300	28.8

#### 96-Position LED Arrays with Lens Mat and Active Cooling Base

Irradiance Values per STAGE - Example (typical values)

		Irradiance at Surface of Each Lens Mat Tip						
		Stage 1	Stage 2	Stage 3	Stage 4	Stage 5		
Catalog No.	Wavelength	(mW/cm2)	(mW/cm2)	(mW/cm2)	(mW/cm2)	(mW/cm2)		
LUM296LA365	UV365	125	280	405	535	690		
LUM296LA375	UV375	125	255	380	560	715		
LUM296LA385	UV385	155	330	510	470	840		
LUM296LA395	UV395	155	330	535	715	865		
LUM296LA405	UV405	125	305	460	635	815		
LUM296LA420	420-Violet	155	305	460	610	765		
LUM296LA445	445-Indigo	255	510	765	995	1225		
LUM296LA470	470-Blue	230	485	715	915	1120		
LUM296LA505	505-Cyan	180	330	460	585	690		
LUM296LA527	527-Green	130	280	410	510	560		
LUM296LA590	590-Amber	205	380	585	765	915		
LUM296LA630	630-Red	155	280	435	585	740		
LUM296LA660	660-Deep Red	205	355	535	715	865		
LUM296LA730	IR730	180	330	485	635	790		
LUM296LAWHT	White	255	510	765	1020	1530		

Example 1 (Default: linear Step)

**STAGE 1 - 50mW** 

**STAGE 2 - 100mW** 

**STAGE 3 - 150mW** 

**STAGE 4 - 200mW** 

**STAGE 5 - 250mW** 

Example 2\*
(Custom: high output)
STAGE 1 - 100mW

**STAGE 2 - 250mW** 

ple 2\* Example 3\*
om: high output) (Custom: high resolution)

STAGE 1 - 100mW STAGE 2 - 110mW

**STAGE 3 - 500mW STAGE 3 - 115mW STAGE 4 - 750mW STAGE 4 - 120mW** 

STAGE 5 - 1000mW STAGE 5 - 125mW

\* For custom STAGE settings, please contact Analytical Sales & Services before ordering. Note: STAGES may only be calibrated at the time of shipment.

## 96-Position LED Arrays with **Lens Mat** and **Solid Base**

Radiant Flux Values per STAGE - Example (typical values)

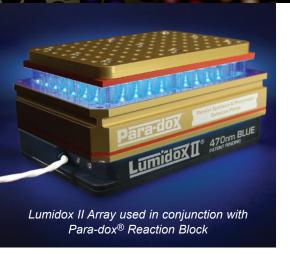
		Stage 1 Ra	adiant Flux	Stage 2 Ra	diant Flux	Stage 3 Ra	adiant Flux	Stage 4 Ra	adiant Flux	Stage 5 Ra	adiant Flux
Catalog No.	Wavelength	Per well (mW)	Total (W)								
LUM296LA365	UV365	55	5.3	110	10.8	165	15.8	215	20.6	395	37.9
LUM296LA375	UV375	50	4.8	125	12.0	160	15.4	220	21.1	275	26.4
LUM296LA385	UV385	65	6.2	145	13.9	210	20.2	350	33.6	425	40.8
LUM296LA395	UV395	65	6.2	135	13.0	250	24.0	330	31.7	510	49.0
LUM296LA405	UV405	70	6.7	145	13.9	200	19.2	285	27.4	435	41.8
LUM296LA420	420-Violet	60	5.8	120	11.5	180	17.3	235	22.6	340	32.6
LUM296LA445	445-Indigo	100	9.6	195	18.7	285	27.4	370	35.5	515	49.4
LUM296LA470	470-Blue	95	9.1	190	18.2	275	26.4	350	33.6	500	48.0
LUM296LA505	505-Cyan	60	5.8	115	11.0	165	15.8	210	20.2	290	27.8
LUM296LA527	527-Green	55	5.3	100	9.6	140	13.4	175	16.8	215	20.6
LUM296LA590	590-Amber	75	7.2	145	13.9	210	20.2	295	28.3	380	36.5
LUM296LA630	630-Red	55	5.3	115	11.0	175	16.8	230	22.1	330	31.7
LUM296LA660	660-Deep Red	70	6.7	140	13.4	205	19.7	275	26.4	400	38.4
LUM296LA730	IR730	65	6.2	125	12.0	185	17.8	245	23.5	365	35.0
LUM296LAWHT	White	70	6.7	140	13.4	210	20.2	275	26.4	400	38.4

#### 96-Position LED Arrays with **Lens Mat** and **Solid Base**

Irradiance Values per STAGE - Example (typical values)

		Irradiance at Surface of Each Lens Mat Tip						
		Stage 1	Stage 2	Stage 3	Stage 4	Stage 5		
Catalog No.	Wavelength	(mW/cm2)	(mW/cm2)	(mW/cm2)	(mW/cm2)	(mW/cm2)		
LUM296LS365	UV365	280	560	840	1095	2010		
LUM296LS375	UV375	255	635	815	1120	1400		
LUM296LS385	UV385	330	740	1070	1785	2165		
LUM296LS395	UV395	330	690	1275	1680	2595		
LUM296LS405	UV405	355	740	1020	1450	2215		
LUM296LS420	420-Violet	305	610	915	1195	1730		
LUM296LS445	445-Indigo	510	995	1455	1885	2625		
LUM296LS470	470-Blue	485	970	1400	1785	2545		
LUM296LS505	505-Cyan	305	585	840	1070	1475		
LUM296LS527	527-Green	280	510	715	890	1095		
LUM296LS590	590-Amber	380	740	1070	1500	1935		
LUM296LS630	630-Red	280	585	890	1170	1680		
LUM296LS660	660-Deep Red	355	715	1045	1400	2035		
LUM296LS730	IR730	330	635	940	1250	1860		
LUM296LSWHT	White	355	715	1070	1400	2035		





## **Lumidox Gen2 96-Position LED Arrays**

Incorporating a uniquely molded ultra-clear chemically inert **Lens Mat**, Analytical Sales' patent-pending design captures nearly all of the light emitted by the LEDs and directs it into the reaction vials. This new design has a potential 40x improvement from previous generations.

An alternative flat-surface, chemically inert **Diffuse Mat** is available for standard SLAS footprints, as well as niche applications such as illuminating cell culture flasks, reservoir plates, and large scale containers.

Both array styles are available with either an Active Cooling Base or a Passive (solid) Base. Two different lens styles and two bases allow for 60+ possible configurations. *Note: Solid base arrays are NOT self-cooling and require the use of a sufficient chiller/cooling device (see Thermal Transfer Deck on page 18)*.



#### 96-Position LED Arrays with Lens Mat and Active Cooling Base

Catalog No.	Description	Wavelength
LUM296LA365	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV365
LUM296LA375	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV375
LUM296LA385	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV385
LUM296LA395	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV395
LUM296LA405	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV405
LUM296LA420	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	420-VIOLET
LUM296LA445	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	445-INDIGO
LUM296LA470	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	470-BLUE
LUM296LA505	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	505-CYAN
LUM296LA527	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	527-GREEN
LUM296LA590	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	590-AMBER
LUM296LA630	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	630-RED
LUM296LA660	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	660-DEEP RED
LUM296LA730	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	730-IR
LUM296LAWHT	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	WHITE



#### 96-Position LED Arrays with Lens Mat and Solid Base

(requires the use of a sufficient chiller/cooling device - see Thermal Transfer Deck, page 19)

Catalog No.	Description	Wavelength
LUM296LS365	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV365
LUM296LS375	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV375
LUM296LS385	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV385
LUM296LS395	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV395
LUM296LS405	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV405
LUM296LS420	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	420-VIOLET
LUM296LS445	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	445-INDIGO
LUM296LS470	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	470-BLUE
LUM296LS505	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	505-CYAN
LUM296LS527	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	527-GREEN
LUM296LS590	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	590-AMBER
LUM296LS630	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	630-RED
LUM296LS660	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	660-DEEP RED
LUM296LS730	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	730-IR
LUM296LSWHT	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	WHITE



Lumidox Systems come with one pair of UV protective goggles. Additional goggles can be purchased.



#### **UV Safety Goggles**

**UV LIGHT** 

WEAR EYE PROTECTION

00	
Description	Qty
Additional UV Safety Goggles	Each
	Description







#### 96-Position LED Arrays with Diffuse Mat and Active Cooling Base

Catalog No.	Description	Wavelength
LUM296DA365	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	UV365
LUM296DA375	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	UV375
LUM296DA385	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	UV385
LUM296DA395	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	UV395
LUM296DA405	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	UV405
LUM296DA420	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	420-VIOLET
LUM296DA445	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	445-INDIGO
LUM296DA470	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	470-BLUE
LUM296DA505	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	505-CYAN
LUM296DA527	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	527-GREEN
LUM296DA590	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	590-AMBER
LUM296DA630	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	630-RED
LUM296DA660	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	660-DEEP RED
LUM296DA730	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	730-IR
LUM296DAWHT	Lumidox Gen2 LED Array, with Diffuse Mat and Active Cooling Base	WHITE

#### 96-Position LED Arrays with **Diffuse Mat and Solid Base**

(requires the use of a sufficient chiller/cooling device - see Thermal Transfer Deck, page 19)

Catalog No.	Description	Wavelength
LUM296DS365	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	UV365
LUM296DS375	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	UV375
LUM296DS385	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	UV385
LUM296DS395	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	UV395
LUM296DS405	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	UV405
LUM296DS420	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	420-VIOLET
LUM296DS445	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	445-INDIGO
LUM296DS470	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	470-BLUE
LUM296DS505	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	505-CYAN
LUM296DS527	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	527-GREEN
LUM296DS590	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	590-AMBER
LUM296DS630	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	630-RED
LUM296DS660	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	660-DEEP RED
LUM296DS730	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	730-IR
LUM296DSWHT	Lumidox Gen2 LED Array, with Diffuse Mat and Solid Base	WHITE



#### **Lumidox II Controller**

- USB Enabled API
- 5 individually calibrated and configured levels of optical power
- Optical power levels are provided in easy to read, easy to calculate whole numbers
- · Onboard illumination elapsed timer
- · Automatic countdown shut off timer
- Calibration data of multiple devices can be stored onboard, allowing the use of different Arrays or LumLamps with one controller.

Catalog No.	Description
LUM2CON	Lumidox Gen2 LED Controller. Includes: Controller, Power Supply, Power Cable, Manual

#### **Adapters for Gen 1 Arrays**

The Lumidox Gen II Controller is backwards compatible with Gen I arrays via the use of an adapter.

Catalog No.	Description	Qty
LUM2ADAPT	Adapter for Gen2 Controller (LUM2CON) to Gen1, 96-Position NON-UV LED Arrays	Each
LUM2ADAPT-UV	Adapter for Gen2 Controller (LUM2CON) to Gen1, 96-Position UV LED Arrays	Each
LUM2ADAPT24	Adapter for Gen2 Controller (LUM2CON) to Gen1, 24-Position LED Arrays	Each

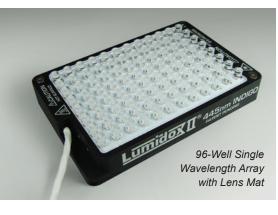












#### **Discovery/Screening LED Arrays**

Lumidox® II Discovery LED Arrays for screening offer scientists an economical and efficient way to evaluate all of the wavelengths that the Lumidox II line of products has to offer. Discovery LED arrays come in varying wavelength combinations and are available with either a solid or active cooling base.

There are currently 15 wavelength options available in the Lumidox II product line. With Discovery LED arrays, 9 of those wavelengths are combined into 3 units (no need to purchase 9 individual units). The three models of Discovery LED arrays come in these wavelength combinations:

- Discovery 1 (3 UVs): 375nm, 385nm, 395nm (4 columns of 8 LEDs / wavelength)
- Discovery 2 (UV405, Indigo, Blue & Amber):
   405nm, 445nm, 470nm, 590nm (3 columns of 8 LEDs / wavelength)
- Discovery 3 (Cyan, Green): 505nm, 527nm (6 columns of 8 LEDs / wavelength)

The six remaining wavelengths in the Lumidox II line - UV365, 420-VIOLET, 630-RED, 660-DEEP RED, 730-IR, and White - are not compatible for placement in Discovery LED arrays due to varying electrical conditions. They can, however, be purchased as single wavelength units to complete your LED array collection.

#### 96-Well Discovery LED Arrays with Lens Mat and Active Cooling Base

Catalog No.	Description	Wavelengths (nm)
	Discovery 1 LED Array with Long Mat 9 Active Cooling Dags	UV375
LUM296LAG1	Discovery 1 LED Array with Lens Mat & Active Cooling Base (4 rows of 8 LEDs per wavelength)	UV385
	(4 Tows of 6 LEDs per wavelength)	UV395
		UV405
LUM296LAG2	Discovery 2 LED Array with Lens Mat & Active Cooling Base	445-INDIGO
LUIVIZ90LAGZ	(3 rows of 8 LEDs per wavelength)	470-BLUE
		590-AMBER
LUM296LAG3	Discovery 3 LED Array with Lens Mat & Active Cooling Base	505-CYAN
LUMZ96LAG3	(6 rows of 8 LEDs per wavelength)	527-GREEN
Single Wavelength LED	O Arrays	
LUM296LA365	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	UV365
LUM296LA420	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	420-VIOLET
LUM296LA630	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	630-RED
LUM296LA660	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	660-DEEP RED
LUM296LA730	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	730-IR
LUM296LAWHT	Lumidox Gen2 LED Array, with Lens Mat and Active Cooling Base	WHITE

## 96-Well Discovery LED Arrays with **Lens Mat and Solid Base** (requires the use of a sufficient chiller/cooling device - see Thermal Transfer Deck, page 19)

Catalog No.	Description	Wavelengths (nm)
	96-Well Discovery LED Array with Lens Mat & Solid Base	UV375
LUM296LSG1	(4 rows of 8 LEDs per wavelength)	UV385
	(4 TOWS OF 6 LEDS per wavelength)	UV395
		UV405
LUM296LSG2	96 Well Discovery LED Array with Lens Mat & Solid Base	445-INDIGO
LUIVIZ90L3GZ	(3 rows of 8 LEDs per wavelength)	470-BLUE
		590-AMBER
LUM296LSG3	96 Well Discovery LED Array with Lens Mat & Solid Base	505-CYAN
LUMZ90L3G3	(6 rows of 8 LEDs per wavelength)	527-GREEN
Single Wavelength	LED Arrays	
LUM296LS365	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV365
LUM296LS365 LUM296LS420	Lumidox Gen2 LED Array, with Lens Mat and Solid Base Lumidox Gen2 LED Array, with Lens Mat and Solid Base	
	2	420-VIOLET
LUM296LS420	Lumidox Gen2 LED Array, with Lens Mat and Solid Base	420-VIOLET 630-RED
LUM296LS420 LUM296LS630	Lumidox Gen2 LED Array, with Lens Mat and Solid Base Lumidox Gen2 LED Array, with Lens Mat and Solid Base	UV365 420-VIOLET 630-RED 660-DEEP RED 730-IR

## Lumidox II 24-Position LED Arrays with 9mm Spacing



Lumidox<sup>®</sup> II 24-Well LED Arrays are available in the these wavelengths:

365 (UV365)	405 (UV405)	527 (Green)
375 (UV375)	445 (Indigo)	590 (Amber
385 (UV385)	470 (Blue)	630 (Red)
395 (UV395)	505 (Cyan)	White

#### 24-Position LED Arrays with 9mm Well Spacing, Active Cooling Base

Description	Wavelength
24-Well LED Array with 9mm Spacing, Active Cooling Base	UV365
24-Well LED Array with 9mm Spacing, Active Cooling Base	UV375
24-Well LED Array with 9mm Spacing, Active Cooling Base	UV385
24-Well LED Array with 9mm Spacing, Active Cooling Base	UV395
24-Well LED Array with 9mm Spacing, Active Cooling Base	UV405
24-Well LED Array with 9mm Spacing, Active Cooling Base	445-INDIGO
24-Well LED Array with 9mm Spacing, Active Cooling Base	470-BLUE
24-Well LED Array with 9mm Spacing, Active Cooling Base	505-CYAN
24-Well LED Array with 9mm Spacing, Active Cooling Base	527-GREEN
24-Well LED Array with 9mm Spacing, Active Cooling Base	590-AMBER
24-Well LED Array with 9mm Spacing, Active Cooling Base	630-RED
24-Well LED Array with 9mm Spacing, Active Cooling Base	WHITE
	24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base 24-Well LED Array with 9mm Spacing, Active Cooling Base

#### 24-Position LED Arrays with 9mm Well Spacing, Solid Base

Catalog No.	Description	Wavelength
LUM224LS365	24-Well LED Array with 9mm Spacing, Solid Base	UV365
LUM224LS375	24-Well LED Array with 9mm Spacing, Solid Base	UV375
LUM224LS385	24-Well LED Array with 9mm Spacing, Solid Base	UV385
LUM224LS395	24-Well LED Array with 9mm Spacing, Solid Base	UV395
LUM224LS405	24-Well LED Array with 9mm Spacing, Solid Base	UV405
LUM224LS445	24-Well LED Array with 9mm Spacing, Solid Base	445-INDIGO
LUM224LS470	24-Well LED Array with 9mm Spacing, Solid Base	470-BLUE
LUM224LS505	24-Well LED Array with 9mm Spacing, Solid Base	505-CYAN
LUM224LS527	24-Well LED Array with 9mm Spacing, Solid Base	527-GREEN
LUM224LS590	24-Well LED Array with 9mm Spacing, Solid Base	590-AMBER
LUM224LS630	24-Well LED Array with 9mm Spacing, Solid Base	630-RED
LUM224LSWHT	24-Well LED Array with 9mm Spacing, Solid Base	WHITE

## Lumidox II 24-position LED Arrays with 18mm Spacing



Built specifically for use with our Para-dox® 24-well, 18mm spaced Reactor Block



#### 24-Position LED Arrays with 18mm Well Spacing, Active Cooling Base

Catalog No.	Description	Wavelength
LUM22418LA365	24-Well LED Array with 18mm Spacing, Active Cooling Base	UV365
LUM22418LA375	24-Well LED Array with 18mm Spacing, Active Cooling Base	UV375
LUM22418LA385	24-Well LED Array with 18mm Spacing, Active Cooling Base	UV385
LUM22418LA395	24-Well LED Array with 18mm Spacing, Active Cooling Base	UV395
LUM22418LA405	24-Well LED Array with 18mm Spacing, Active Cooling Base	UV405
LUM22418LA445	24-Well LED Array with 18mm Spacing, Active Cooling Base	445-INDIGO
LUM22418LA470	24-Well LED Array with 18mm Spacing, Active Cooling Base	470-BLUE
LUM22418LA505	24-Well LED Array with 18mm Spacing, Active Cooling Base	505-CYAN
LUM22418LA527	24-Well LED Array with 18mm Spacing, Active Cooling Base	527-GREEN
LUM22418LA590	24-Well LED Array with 18mm Spacing, Active Cooling Base	590-AMBER
LUM22418LA630	24-Well LED Array with 18mm Spacing, Active Cooling Base	630-RED
LUM22418LAWHT	24-Well LED Array with 18mm Spacing, Active Cooling Base	WHITE

#### 24-Position LED Arrays with 18mm Well Spacing, Solid Base

Description	Wavelength
24-Well LED Array with 18mm Spacing, Solid Base	UV365
24-Well LED Array with 18mm Spacing, Solid Base	UV375
24-Well LED Array with 18mm Spacing, Solid Base	UV385
24-Well LED Array with 18mm Spacing, Solid Base	UV395
24-Well LED Array with 18mm Spacing, Solid Base	UV405
24-Well LED Array with 18mm Spacing, Solid Base	445-INDIGO
24-Well LED Array with 18mm Spacing, Solid Base	470-BLUE
24-Well LED Array with 18mm Spacing, Solid Base	505-CYAN
24-Well LED Array with 18mm Spacing, Solid Base	527-GREEN
24-Well LED Array with 18mm Spacing, Solid Base	590-AMBER
24-Well LED Array with 18mm Spacing, Solid Base	630-RED
24-Well LED Array with 18mm Spacing, Solid Base	WHITE
	24-Well LED Array with 18mm Spacing, Solid Base





#### Flow Reactor

The Para-dox® Flow Reactor offers an alternative way to conduct photoreactive research on fluidic samples. Used in conjunction with a Lumidox®II Diffuse Mat Array, wavelength-specific light can be applied to sample fluid circulating through 1/8" OD tubing. The Flow Reactor can be liquid cooled or heated and is highly configurable. Add a Thermal Transfer Deck for a complete flow solution.

Users may configure the Flow Reactor in various ways, including multiple input streams using the machined channels. Tubing can be replaced and installed by the user with a tubing tamp tool.

- SLAS/SBS footprint
- Dripless CPC fittings
- 1/8" OD unions for ease of analyte injection
- User-configurable output/input locations, side or top (factory set to side).
- Exposure volume of 2mL using 1/8" OD, 1/16" ID tubing. The exposure volume may be set to 1mL if two streams are used.
- FEP Tubing Provided
- Cradled design reduces light bleed and helps "seat" and align Lumidox unit
- Compatible with water, glycol based coolants, and silicone based coolants

#### Flow Reactor

Catalog No.	Description	Qty
266100	Flow Reactor	Each



#### Recommended chiller:

Cat. No.	Description	Qty
TCube Edge	TCube Edge Chiller	Each















#### Lumidox® II Controller

- Controls the output of a Lumidox Array or LumLamp
- 5 individually calibrated and configured levels of optical power (STAGES)
- Optical power levels are provided in easy to read, easy to calculate whole numbers.
- Onboard illumination elapsed timer
- Automatic countdown shut off timer
- Calibration data of multiple devices can be stored onboard, allowing the use of different Arrays or LumLamps with one controller.
- USB Enabled API

Lumidox II Controllers are manufactured in-house. Optical power levels are provided in easy to read, easy to calculate whole numbers. Simply scroll through the menu to select your desired output. An onboard illumination elapsed timer is provided, as well as a countdown to automatic shut off timer.

Lumidox Arrays and LumLamps are custom tuned in-house and provide 5 individually calibrated and configured levels of optical power. Arrays and LumLamps are not unique to controllers, their calibration data is stored onboard, allowing users to use different illuminators with one controller.

The Lumidox II Controller also comes equipped with **USB enabled API** so that you can run your setup remotely from your computer.

#### **Lumidox Gen2 LED Controller**

Catalog No.	Description	Qty
LUM2CON	Lumidox Gen2 LED Controller. Includes:	Each
	Controller, Power Supply, Power Cable, Manual	

#### Adapters for Gen 1 Arrays

The Lumidox Gen II Controller is backwards compatible with Gen I arrays via the use of an adapter.

Catalog No.	Description	Qty
LUM2ADAPT	Adapter for Gen2 Controller (LUM2CON) to Gen1, 96-Position NON-UV LED Arrays	Each
LUM2ADAPT-UV	Adapter for Gen2 Controller (LUM2CON) to Gen1, 96-Position UV LED Arrays	Each
LUM2ADAPT24	Adapter for Gen2 Controller (LUM2CON) to Gen1, 24-Position LED Arrays	Each





## A lamp system specifically designed for your experimental needs!

#### LumLamp

The new LumLamp system stands apart with multiple wavelengths, tight line widths, and remote (corded) operation. It has radiant flux levels up to 3W. LumLamps are directly controlled with our Lumidox® II Controller, providing optical stability, user configurable timing and output configuration.

With 4 differing reflector types, 3 styles of lens, and up to 12 wavelengths, LumLamp is available in 104+\* possible configurations.

Reflector Types:	Lens Styles:
15° Narrow Spot Beam	Clear Polycarbonate
30° Medium Beam	Diffused Polycarbonate
40° Wide Beam	Quartz
80° Extra Wide Beam	

Lab stand mount and alternative mounting options available soon.

#### LumLamps are available in the following wavelengths:

365 (UV365)	395 (UV395)	470 (Blue)	590 (Amber)
375 (UV375)	405 (UV405)	505 (Cyan)	630 (Red)
385 (UV385)	445 (Indigo)	527 (Green)	White

<sup>\*</sup> Contact us for custom wavelengths

## **Lumidox II Controller**

- USB Enabled API
- 5 individually calibrated and configured levels of optical power
- Optical power levels are provided in easy to read, easy to calculate whole numbers.
- Onboard illumination elapsed timer
- · Automatic countdown shut off timer
- Calibration data of multiple devices can be stored onboard, allowing the use of different Arrays or LumLamps with one controller.

#### **Lumidox Gen2 LED Controller**

Catalog No.	Description	Qty
LUM2CON	Lumidox Gen2 LED Controller. Includes: Controller,	Each
	Power Supply, Power Cable, Manual	

## Analytical

## **Lens Types**

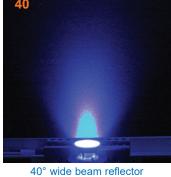


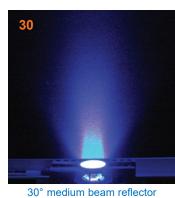


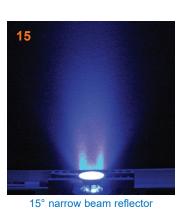


**Beam Angle - Diffuse Lens** 



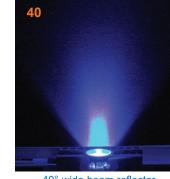


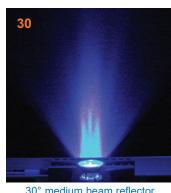




**Beam Angle - Clear Lens** 







80° extra wide beam reflector

40° wide beam reflector

30° medium beam reflector

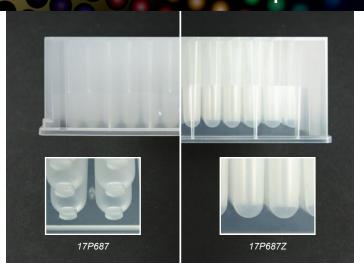
15° narrow beam reflector

31

	Stage 1 Radiant Flux (mW)	Stage 2 Radiant Flux (mW)	Stage 3 Radiant Flux (mW)	Stage 4 Radiant Flux (mW)	Stage 5 Radiant Flux (mW)
Quartz Lens 365	700	1200	1700	2100	2600
Quartz Lens 375	900	1700	2400	3000	3600
Quartz Lens 385	1100	2000	3000	3900	4700
Quartz Lens 395	1100	2000	3000	3800	4700
Quartz Lens 405	1100	2200	3200	4200	5000
Polycarbonate Lens 445	1000	1800	2500	3200	3700
Polycarbonate Lens 470	1000	1800	2400	2800	3300
Polycarbonate Lens 505	600	900	1100	1300	1500
Polycarbonate Lens 527	500	700	900	1000	1100
Polycarbonate Lens 590	600	1000	1300	1500	1700
Polycarbonate Lens 630	400	600	800	1000	1200
Polycarbonate Lens White	800	1500	2100	2700	3200

Visit our website for part numbers and pricing.

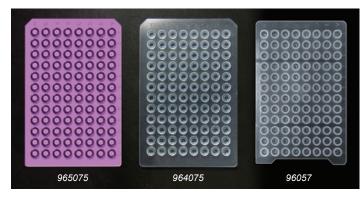
#### **Accessories - Filter Plates**



#### **Advantage™ 1mL Collection Plates**

#### Round Well with Round Bottom

Cat. No.	Description	Qty
17P687Z	1mL 96-Well Collection Plate with Round Well Bottoms	20
17P687	1mL 96-Well Collection Plate with Round Well Bottoms	20



#### Advantage™ 96-Well Cap Mats - Round Well

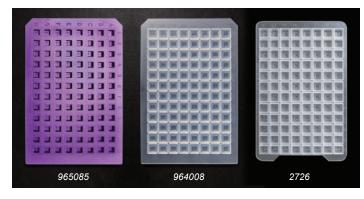
Cat. No.	Description	Qty
965075	Purple Pre-Scored Ultra Thin Round Cap Mat	5
964075	Clear Pre-Slit Ultra Thin Round Well Cap Mat	5
96057	Autosampler Compatible 1mL Cap Mat with "X"	20



## Advantage™ 2mL 96-Well Collection Plates

#### **Square Well with V-Shaped or Round Bottom**

Cat. No.	Description	Qty
27P687	2mL 96-Well Collection Plate with Round-Bottom Wells	20
59623-23	2mL 96-Well Collection Plate with V-Bottom Wells	10



#### Advantage™ 96-Well Cap Mats - Square Well

Cat. No.	Description	Qty
965085	Purple Ultra Thin <i>Pre-Slit</i> Square Cap Mat	5
964008	Mighty Mat Purple Ultra Thin Square Cap Mat	5
2726	2mL Pierceable Cap Mat with "X" on Surface	20







#### **24-Well Collection Plates and Cap Mats**

Cat. No.	Description	Qty
24727	24-Well Collection Plate with Round-Bottom Wells. 10mL/well, 240mL max	25
24108	24-Well Collection Plate with Pyramid-Bottom Wells. 10mL/well, 240mL max	25
24777	Silicone/PTFE Cap Mat for 24-well Collection Plates	5

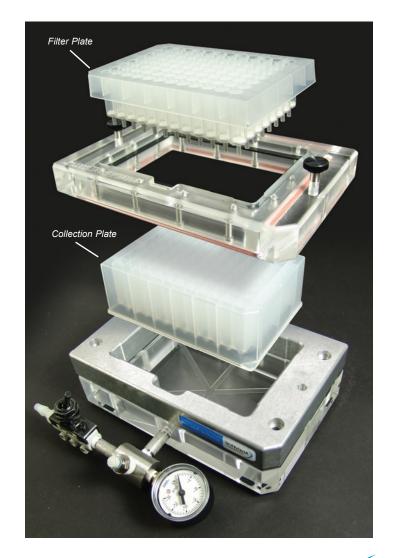
### **Vacuum Manifold Filtration System**

#### for SPE Sample Preparation

- Sturdy, clear acrylic construction
- Adjustable vacuum control
- Easy access to filtrate
- Compatible with all standard filter bottom microplates
- Collect into any storage plate
- Compatible with robotic handling

The Advantage™ Vacuum Manifold Filtration System allows you to collect into any storage plate (including low volume collection plates) and is compatible with robotic handling systems. It uses an integral flat gasket between the collection plate and the filtration plate which stays totally secure within the system. A spacer is supplied for use with low volume collection plates. The Vacuum Manifold is constructed of tough acrylic for optimum performance and visual accessibility.

Cat. No.	Description	Qty
96844	Vacuum Manifold Filtration System for	Each
	SPE Sample Filtration	





#### **Drug Discovery 96-Well Filter Plates**

• Low Protein Binding • General Filtration

Cat. No.	Description	Qty
64PP45	400ul Hydrophobic PP 0 45um	25

#### **General Filtration 96-well Filter Plates**

- Use prior to LCMS and Microarraying

Low Protein Binding - Sample in Solvent

Cat. No.	Description	Qty
96245-10	2ml Hydrophilic PP 0.45µm	10

#### **Diatomaceous 96-Well Filter Plates**

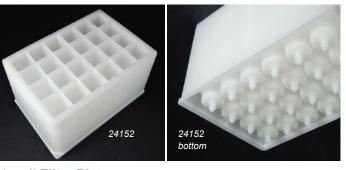
- pH 1-13 No Pre-Treatment of the Bed is Necessary
- Packed with Flux Calcinated Diatomaceous Earth

Cat. No.	Description	Qty
96160-5	1mL Diatomaceous Filter Plate	5



#### **General Filtration 384-well Filter Plates**

Cat. No.	Description	Qty
38407	384-Well Filter Plates, 140μL, Glass Fiber, 0.7μm	10



24-well Filter Plates

Cat. No.	Description	Qty
24152	24 Well Filter Plates, PE 25µm, 15mL	15









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