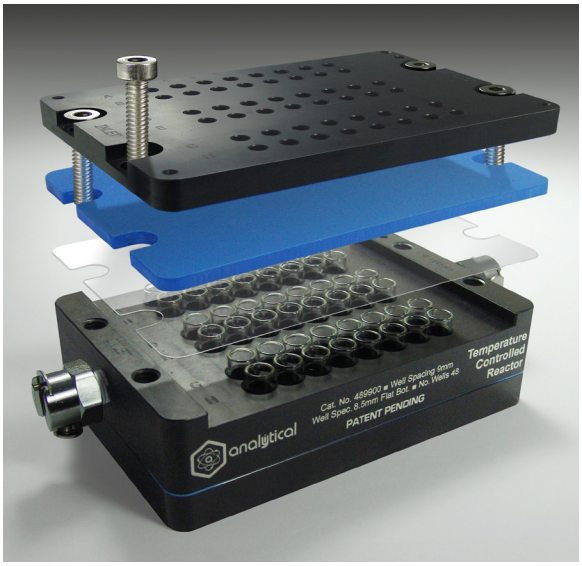
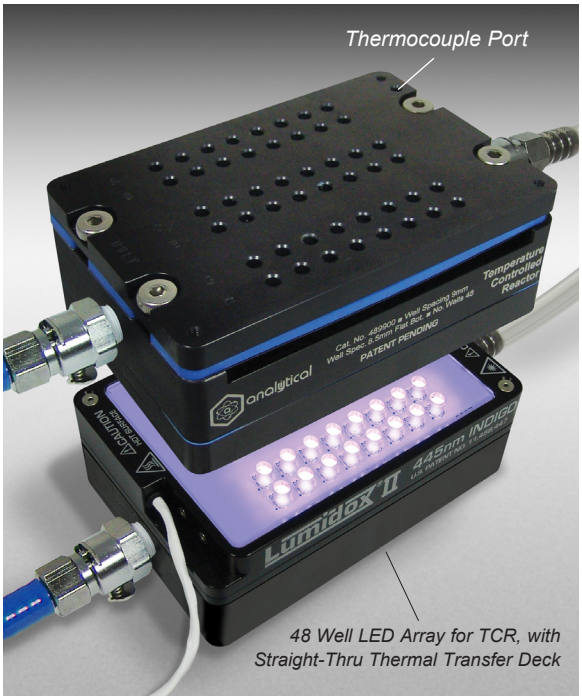
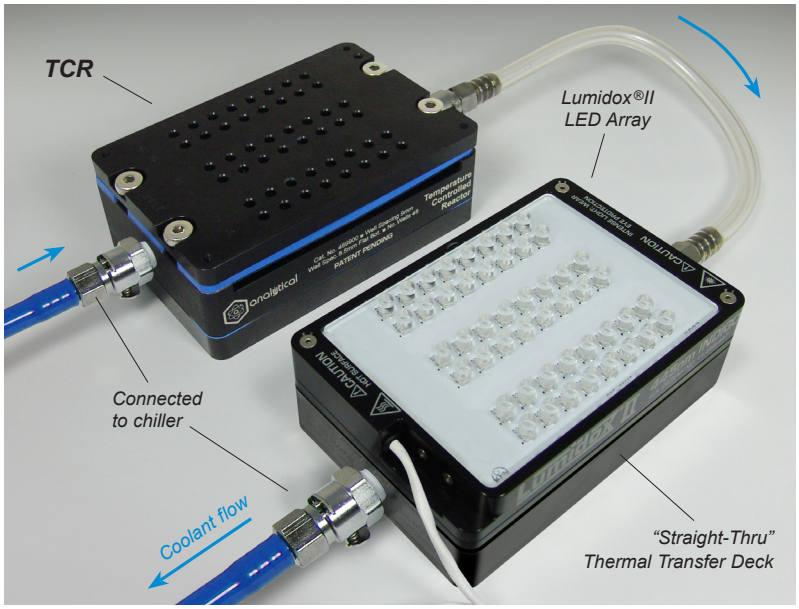
Temperature Controlled Reactor



Temperature Controlled Reactor

- Provides users an option to screen up to 48 individual micro-vials at near-equal temperatures
- Provides extremely uniform thermal control for high throughput experimentation (HTE) with a temperature difference of +/- 1°C
- A specific 48 LED array Lumidox is required to match the new Temperature Controlled Reactor, in order to achieve the performance specifications of the TCR system.
- Capable of enhanced Re-producibility in heating and cooling applications
- High quality, leak-proof CPC fittings for quick and easy tubing connection
- Compatible with a wide range of heat-transfer fluids such as; water (down to 5°C), silicone-based fluids (ie SYLTHERM™), ethylene glycol, and polypropylene glycol
- Designed to standard SLAS dimensions (127.75mm x 85.5mm) with standard 9mm well-to-well pitch
- Compatible with auto-samplers and other staples of high throughput chemistry
- 4mm holes in lid allow for use with most common auto sampler needles
- Threaded holes (6-32) in lid for accessory attachment
- Each TCR unit undergoes a gas-tight and watertight evaluation before they are released.

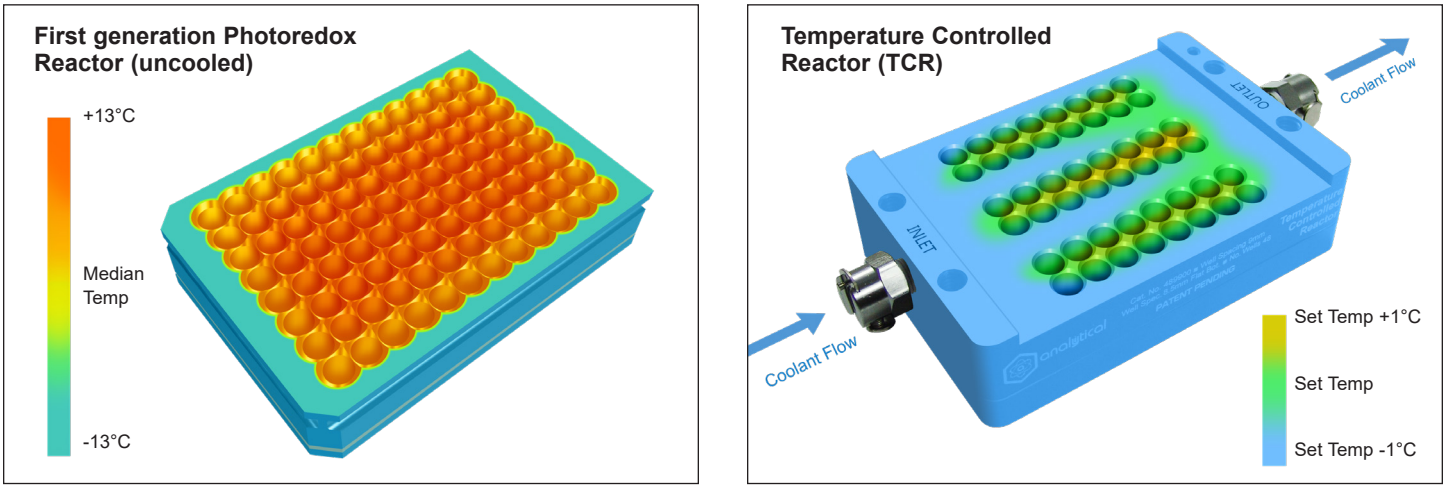




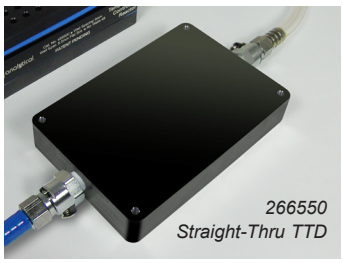
Configuration option: *TCR used in conjunction with a Lumidox®II 48-well Solid Base LED Array, a "Straight-Thru" Thermal Transfer Deck (for additional cooling of array) and connected to an external liquid chiller*

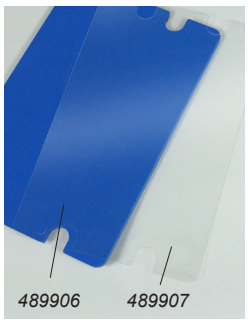
The TCR is a fluid-filled reactor that keeps temperature consistent throughout the block and around your samples. It greatly reduces excessive heat that can be caused by external sources, such as the 48 LED array designed for the TCR. Any fluid within the specified range can be pumped through the reactor to maintain well-to-well temperature uniformity.

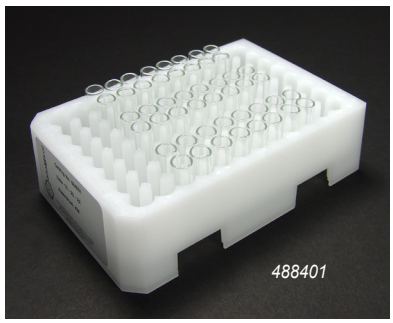
Extreme temperature differences, thermal inconsistency, and thermal overload can all impact experimental validity, especially when using techniques like photocatalysis. The TCR solves these issues. Standard 96-well reactor blocks have no internal fluid path and no way to accurately set and control temperature uniformity. As such, high-powered LEDs used for photocatalysis reactions can produce an overall reactor heat gradient of up to +/- 13°C, with severe heat island effects. Analytical's TCR is capable of controlling temperatures to a uniformity of +/- 1°C. Internal testing and design ensure that the Temperature Controlled Reactor is fully compatible with all accessories provided by Analytical.



Simulated heat maps of a standard 96-well Photoredox Reactor Block vs. a Temperature Controlled Reactor (TCR), when used with a Lumidox®II LED array at full power (stage 5).







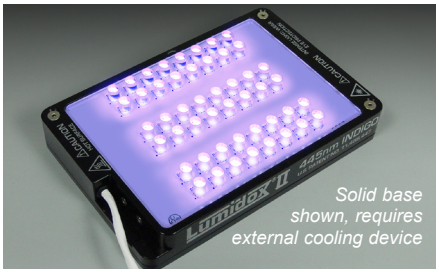
Temperature Controlled Reactor

• 48 Wells (6 Rows of 8) • 9mm Well Spacing

Cat. No.	Description	Qty
489900	**48 Well Temperature Controlled Reactor** Includes: PFA Film, Blue Fluorosilicone Rubber Sealing Mat, Rubber Gasket, Silicone O-Rings, CPC Fittings, PUR Tubing, Screws. *Vials not included.*	Each
489906	1/8" Thick, Blue Fluorosilicone Rubber Sealing Mats for TCR	5
489907	0.005" Thick PFA Sealing Films for TCR	25
489908	9mm OD, 6mm ID, 1.5mm Wide Silicone O-rings for TCR	50
489532	18-8 Stainless Steel Low-Profile Socket Head Screw, with Hex Drive, 5/16"-18 Thread Size, 3/4" Long	5
TCubeEdge	Recirculating Chiller. Operating Range: 0°C - 65°C	Each

Accessories

84001-Case	**1mL** Clear Glass Shell Vials, 8 x 30mm	1000
488401	Well Tray for TCR, Loaded with 48 8x30 Shell Vials (84001-CASE). Includes Tray and Vials.	Each
266550	SLAS Footprint, "Straight-Thru" Thermal Transfer Deck	Each
266703	Daisy Chain Connector for TCR and "Straight-Thru" TTD	Each



Lumidox® II, 48 Well LED Array for TCR, with Lens Mat and Solid Base

Cat. No.	Wavelength
LUM248LS365	UV365
LUM248LS375	UV375
LUM248LS385	UV385
LUM248LS395	UV395
LUM248LS405	UV405
LUM248LS445	445-INDIGO

Cat. No.	Wavelength
LUM248LS470	470-BLUE
LUM248LS505	505-CYAN
LUM248LS527	527-GREEN
LUM248LS590	590-AMBER
LUM248LS630	630-RED
LUM248LSWHT	WHITE

179 Rt 206, Flanders, NJ 07836 • Phone: 973-616-0700 • Fax: 973-616-0133
info@analytical-sales.com • analytical-sales.com