



Solstice Maxi

Compact, high power, multi-position LED photoreactor

Solstice MAXI LED photoreactor

High power, temperature controlled, 12-position photoreactor



- 12 x 20 mL (max) Septum sealed, glass tube reactors
- Efficient vortex stirring
- 365nm, 385nm, 405nm, 425nm, 455nm and 525nm Borealis LED lamp options
- Choice of digital (180W) or analogue (120W) power supplies
- Temperature controlled reactors
- Fits magnetic stirrers with 135 mm top plates
- Safety interlock and thermal cut-out

Introduction:

The Asynt **Solstice MAXI** is a scaled-up version of the original **Solstice** 12-position tube adaptor that, in combination with an Asynt **Borealis MAXI** LED lamp unit, converts a standard laboratory magnetic stirrer (135mm dia. top plate) into a high power, multi-position batch photoreactor.

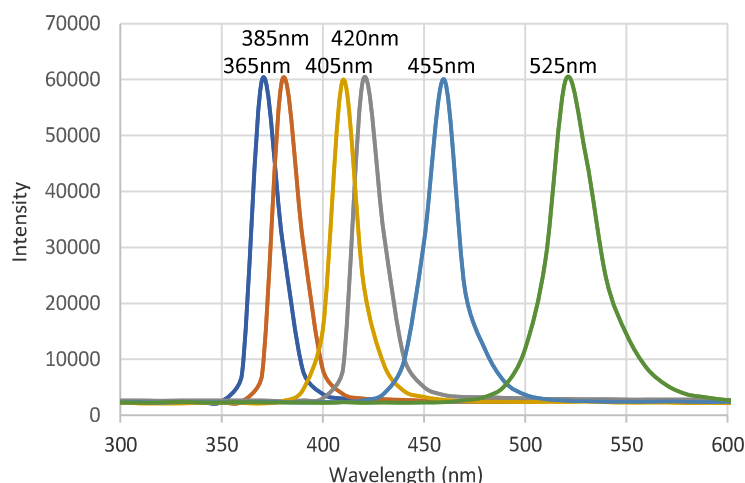
It is fitted with **12 x 20 mL** glass tube reactors (as opposed to 12 x 8ml in **Solstice**). These are septum-sealed to facilitate sampling, de-gassing and oxygen exclusion.

Connection to an external thermoregulating recirculator (or cold water supply) ensures that reactions can be performed reliably at a pre-determined temperature with efficient cooling of the high-power LEDs.

Borealis LED lamp modules & power supply:



Borealis MAXI LED Lamp



Matching fixed wavelength Borealis MAXI LED lamp units are available with wavelengths of 365, 385, 405, 420, 455 and 525nm. These can be specified in both 120W or 180W versions that are powered either by a compact 120W Borealis Scholar analogue power supply (PSU), or the 180W Borealis digital PSU.

The lamp module switches off automatically to avoid damage if the LED backplate temperatures exceed 50 °C (automatic reset after cooling). The complete assembly is light-tight and a safety interlock prevents illumination of the LEDs when the lamp is removed from the Solstice tube adaptor.

120W Borealis LED lamp & Scholar power supply:



120W Borealis MAXI LED lamp & Scholar PSU

120W Borealis LED lamps are designed for use with the cost-effective Borealis Scholar analogue PSU.

This compact and affordable PSU is ideal for standalone use where fume cupboard space is at a premium.

Intensity can be varied in 20% increments using the rotary control knob.

180W Borealis LED lamp & digital power supply:

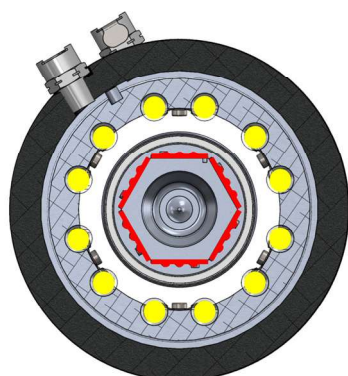


180W Borealis MAXI LED lamp & Digital PSU

180W Borealis LED lamps connect to the larger Borealis power supply. Lamp intensity can be varied with digital control of current (10 - 100% in 5% increments). The digital PSU automatically detects the wavelength of the lamp unit connected; it also monitors and displays current, and the internal reactor temperature measured using a temperature probe inserted directly into one of the tube reactors.

Ethernet, RS232 and USB comms are provided for remote control and external system integration.

Borealis LED lamp units have a hexagonal central core. Each face of which is fitted with identical, *symmetrically* spaced LEDs (shown in red). This, combined with the geometrical arrangement of the individual tube reactors (shown in yellow) ensures that all tubes are irradiated *equally*. Locating studs ensure that the **Borealis Maxi** LED lamp is always fitted in the same position; thereby ensuring meaningful comparison between different reactions when **Solstice MAXI** is used for optimisation of reaction conditions and catalyst screening.



a. Solstice MAXI symmetrical tube & LED arrangement



b. Comparison between Solstice (8 mL) and Solstice MAXI (20 mL) tube reactors

SOLSTICE MAXI Photoreactor Components	
UQ8250	SOLSTICE™ MAXI Parallel Photochemical Batch Reactor Tube Holder, complete including stirrer, 12x 20ml reactor tubes & septa, 12x stir bars & temp. sensor
UQ8250-B	SOLSTICE™ MAXI Parallel Photochemical Batch Reactor Tube Holder, BARE
120W Borealis LED Lamps & SCHOLAR PSU	
UQ8204-M	Borealis LED Lamp Unit, UVA (365nm), 120W (φ 83W) , LED
UQ8222-M	Borealis LED Lamp Unit, UVA (385nm), 120W (φ 97W) , LED
UQ8223-M	Borealis LED Lamp Unit, PURPLE (405nm), 120W (φ 97W) , LED
UQ8203-M	Borealis LED Lamp Unit, BLUE (420nm), 120W (φ 84W) , LED
UQ8202-M	Borealis LED Lamp Unit, BLUE (455nm), 120W (φ 81W) , LED
UQ8200-M	Borealis LED Lamp Unit, GREEN (525nm), 120W , LED
UQ8226-V	Borealis SCHOLAR™ Power Supply, variable intensity, 120W ; 110/230V
180W Borealis LED Lamps & Digital PSU	
UQ8204-HPM	Borealis™ HP LED Lamp Unit, UVA (365nm), 180W (φ 125W) , LED
UQ8222-HPM	Borealis™ HP LED Lamp Unit, UVA (385nm), 180W (φ 146W) , LED
UQ8223-HPM	Borealis™ HP LED Lamp Unit, PURPLE (405nm), 180W (φ 146W) , LED
UQ8203-HPM	Borealis™ HP LED Lamp Unit, BLUE (420nm), 180W (φ 126W) , LED
UQ8202-HPM	Borealis™ HP LED Lamp Unit, BLUE (455nm), 180W (φ 122W) , LED
UQ8200-HPM	Borealis™ HP LED Lamp Unit, GREEN (525nm), 180W , LED
UQ8206	Borealis™ Digital Power Supply, variable intensity, 180W ; 230/110V