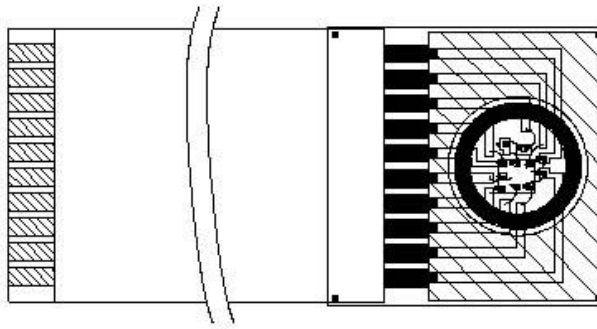


Multi-Wavelength Illuminator OTLA-0100 Preliminary



PRODUCT DESCRIPTION

The OTLA-0100 features nine LED chips packaged into a compact, thermally conductive ceramic substrate and offers wavelengths that range from Ultra Violet through the Visible Red Spectrum (380 nm, 410 nm, 460 nm, 500 nm, 525 nm, 575 nm, 595 nm, 655 nm and 705 nm). The overall illumination diameter is approximately .125". This small size provides easier coupling of secondary focusing optics. This module can be customized to incorporate additional wavelengths and integrate secondary optics.

This product can be used in various applications to illuminate a target sample with multiple colors of light along the same optical path. Typical applications include fluorescence excitation equipment, colorimeters, blood analyzers, clinical chemistry analyzers and DNA analyzers. In addition, the OTLA-0100 offers the inherent long-life and reliability advantages of LED technology versus traditional halogen lamps or lasers.

Product Requirements

Environmental Requirements

Parameter	Min.	Typ.	Max.	Units
Storage Temperature	-20	-	70	°C
Operating Temperature	0	-	60	°C

Optical Requirements

Wavelength & Power Specifications @ 20 mA

Nominal Wavelength (nm)	Peak Wavelength, Typical (nm)	Full Width Half Max, Typical (nm)	Radiometric Power (mW)
383	382	18	1.8
405	409	17	4.7
470	460	28	5.3
505	502	33	3.2
530	525	35	2.4
570	575	19	1.2
594	595	19	0.8
660	654	23	3.0
695	696	30	2.1



OPTO TECHNOLOGY, INC.

160 E. Marquardt Drive, Wheeling, IL 60090
 Phone: (847) 537-4277 Fax: (847) 537-4785
 Website: www.optotech.com

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Optical power measurements made within 3 seconds of turn-on at approximately 25°C.

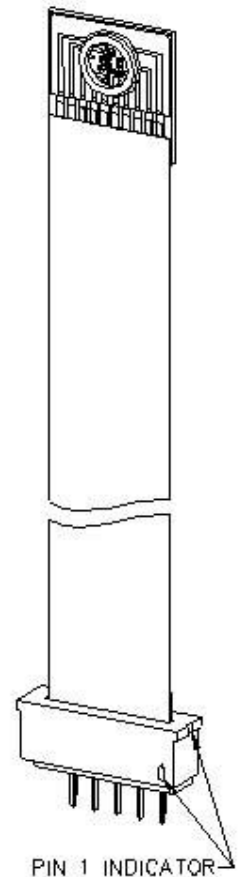
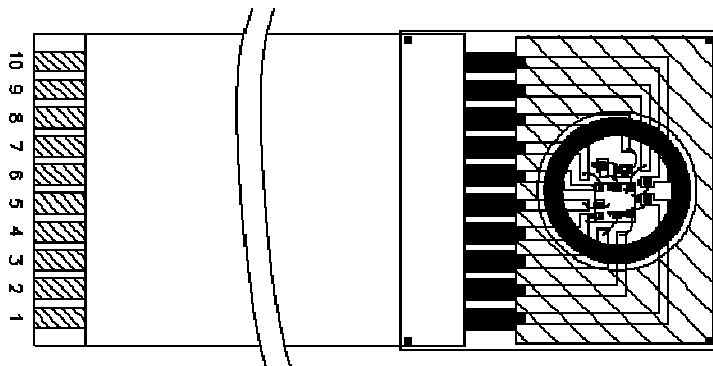
Electrical Requirements

Supplemental Chips Forward Voltage

Nominal Wave-length (nm)	Drive Current (mA)	V _f , Typical (V)
383	20	3.5
405	20	2.0
470	20	3.3
505	20	3.3
530	20	3.3
570	20	6.0
594	20	2.0
660	20	2.0
695	20	1.8

Pin Layout

Pin Number	Function
1	660nm Anode
2	530nm Anode
3	505nm Anode
4	470nm Anode
5	383nm Anode
6	Common Cathode
7	405nm Anode
8	570nm Anode
9	594nm Anode
10	695nm Anode



CONNECTOR: MOLEX P/N: 39-51-3104



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