

NOTE: UNLESS OTHERWISE SHOWN,
TOLERANCES ARE ± .005

PRODUCT DESCRIPTION

The OTLH-0360-UV is a high flux LED based illuminator with ultra-violet (395nm) emission. The LED's are mounted on a BeO substrate that is attached to a TO-66 power package to ensure high reliability through efficient heat transfer.

ILLUMINATOR PART NUMBER GUIDE

PART NUMBER	COLOR	PEAK WAVELENGTH (TYP λ_p , nm)	TYPICAL INITIAL RADIANT STATIC FLUX (TYP Φ_v , mW, $T_J = 25^\circ\text{C}$)
OTLH-0360-UV	UV	395	285 ($I_f = 300\text{ mA}$)

ABSOLUTE MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$)

Power Dissipation	6 W
Static Forward Current	300 mA
Reverse Leakage ($V_r = 20\text{ Volts}$)	$I_R \leq 100\text{ uA}$
Lead Soldering Temperature	$\leq 240^\circ\text{C}$ for $\leq 10\text{ seconds}$



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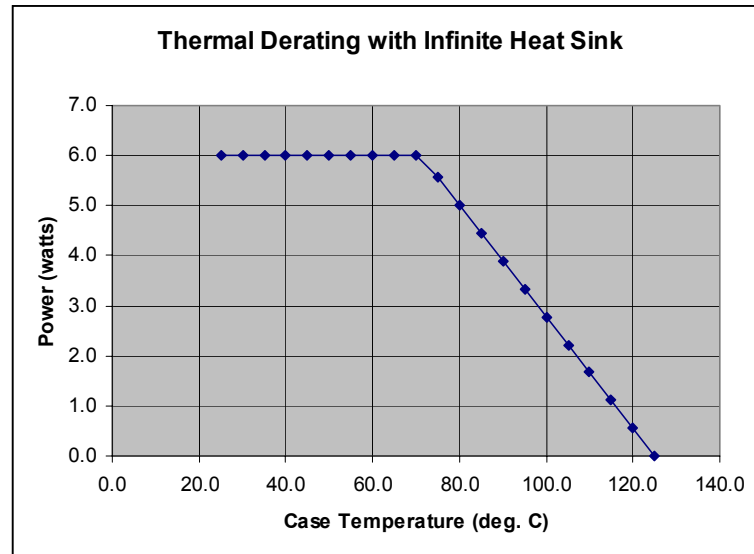
INITIAL ELECTRO-OPTICAL CHARACTERISTICS at $T_J = 25^\circ\text{C}$, $I_F = 200\text{ mA}^*$

TYPE	RADIANT FLUX (mW)		FORWARD VOLTAGE (V_F , V)		PEAK WAVELENGTH (λ_P)			FULL WIDTH HALF MAXIMUM ($\Delta\lambda$, nm)
	MIN	TYP	TYP	MAX	MIN	TYP	MAX	TYP
UV	150	200	18.5	20.0	390	395	400	20

*200mA is a standardized current value corresponding to 20mA/die, an industry standard. It is not the maximum current rating for the part. See table above.

THERMAL PARAMETERS

Operating Temperature	-40 °C to +100 °C
Maximum Junction Temperature	125 °C
Typical Junction to Case Thermal Resistance with infinite heat sink, R_{THJC}	9.0 °C/W



OPTICAL PARAMETERS

Viewing Angle ($\pm \theta_{1/2}$)	± 54 degrees typical
Total Beam Width	± 78 degrees typical



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EYE SAFETY ISSUES

Currently, the LED industry has no universally agreed upon standard to cover eye safety issues associated with the use of LED products. The closest is CEI/IEC 60825-1, used in Europe, which was originally developed for lasers. It was later amended to include LED's, but some in the industry have reservations as to the applicability of this standard to LED's. Under this standard, the OTLH-0360-UV (395nm) is a class 3B LED product and carries the warning:



**LED RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LED PRODUCT**

Handling and Other Precautions

These parts are high power devices and as such are intended to be used with a heatsink. Devices operated without proper heat sink conditions, or proper current limiting will reach hazardous temperatures very quickly. Do not operate devices under these conditions under any circumstances.

These parts contain a Beryllia ceramic substrate. Beryllia ceramic, in solid form and as contained in finished products presents no special health risks. **Warning:** Overexposure to beryllium by inhalation may cause chronic beryllium disease, a chronic lung disease, and cancer. Therefore; processing or recycling using (for example) grinding, melting, welding, or sawing, of this device or as contained in a final assembly may produce airborne dust, fumes, or mists and therefore the use of exhaust ventilation or other controls should be used to prevent exposure to workers.

Electro-Static-Discharge

Any semiconductor circuit can be damaged by ESD. OPTO TECHNOLOGY INC. recommends that all LED circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage to the component. ESD damage can range from subtle performance degradation to complete device failure.

Silicone Overcoat

The OTLH-0360-UV illuminator has a silicone overcoat, which is soft and flexible (40 durometer, Shore A) and should not be immersed or cleaned with water, alcohol, or other chemical solvents or agents. The overcoat material should not be removed, scraped, touched, pressed, or pulled to avoid stress damage and possible breakage of delicate wire bonds.

Surface dust can be carefully removed with a soft brush, or canned air such as those used for cleaning photographic lenses.

The silicone overcoat material has a flammability classification of 94 V-1 and a temperature rating of 130° C.

Mechanical Stress

This component is not suitable for SMT / solder reflow operations. Refrain from twisting leads or unconstrained crimp or lead cut forces, which could break the glass seals of the leads and break internal wire bonds.

Life Support

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- b. A critical component is any component of a life support device or system whose failure to perform can be reasonably be expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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