

# BLUE LASER DIODE

## SDL-445-500-511E



**SEMICOM**  
VISUAL

### Features

**Short Wavelength: 445nm (Typ.)**  
**Threshold current: I<sub>th</sub> = 100mA (Typ.)**  
**Optical Power: P<sub>o</sub> = 500mW (Typ.)**  
**Package: ø5.6mm**

### Applications

**Industrial use**  
**BluRay/HDDVD drive**

### Absolute Maximum Ratings

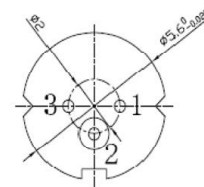
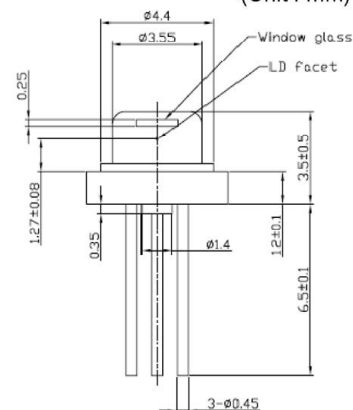
(T<sub>c</sub>=25°C)

Items	Symbols	Values	Unit
Optical Output Power	P <sub>o</sub>	550	mW
Laser Diode Reverse Voltage	V	5	V
Photo Diode Reverse Voltage	V	-	V
Operating Temperature	T <sub>opr</sub>	-10~+30	°C
Storage Temperature	T <sub>stg</sub>	-40~+80	°C

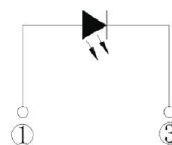
1) Case Temperature

### Package

Tolerance : ± 0.2  
(Unit : mm)



### Pin Connection



E-type

### Electrical and Optical Characteristics

(T<sub>c</sub>=25°C)

Items	Symbols	Min	Type	Max.	Unit	Condition
Optical Output Power	P <sub>o</sub>	-	500	-	mW	CW
Threshold Current	I <sub>th</sub>	-	100	140	mA	CW
Operating Current	I <sub>op</sub>	-	500	650	mA	P <sub>o</sub> =500mW
Slope Efficiency	η	-	1.5	1.8	mW/mA	P <sub>o</sub> =500mW
Operating Voltage	V <sub>op</sub>	-	5	6	V	P <sub>o</sub> =500mW
Monitor Current	I <sub>m</sub>	-	-	-	mA	P <sub>o</sub> =500mW
Lasing Wavelength	λ	440	445	455	nm	P <sub>o</sub> =500mW
Beam Divergence	//	7	15	25	°	P <sub>o</sub> =500mW
	⊥	30	40	50	°	P <sub>o</sub> =500mW
Beam Angle	△//	-	-	±3	°	P <sub>o</sub> =500mW
	△⊥	-	-	±3	°	P <sub>o</sub> =500mW

\* Angle at 50% peak intensity (full-width at half-maximum)

Note: The above specification is subject to change without notice