

# BLUE-VIOLET LASER DIODE

## SDL-405-100-511E



**SEMICOM**  
VISUAL

### Features

**Wavelength: 405nm (Typ.)**  
**Threshold current:  $I_{th} = 35\text{mA}$  (Typ.)**  
**Optical Power:  $P_o = 100\text{mW}$  (Typ.)**  
**Package:  $\phi 5.6\text{mm}$**

### Applications

**Industrial use**  
**BluRay Drive**

### Absolute Maximum Ratings

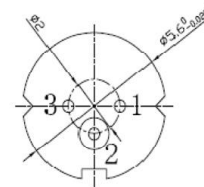
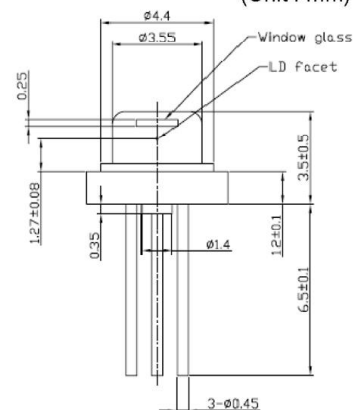
( $T_c=25^\circ\text{C}$ )

Items	Symbols	Values	Unit
Optical Output Power	$P_o$	120	mW
Laser Diode Reverse Voltage	V	5	V
Photo Diode Reverse Voltage	V	-	V
Operating Temperature	$T_{opr}$	$-10^{\sim}+70$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	$-40^{\sim}+85$	$^\circ\text{C}$

1) Case Temperature

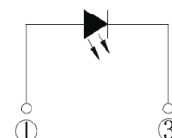
### Package

Tolerance :  $\pm 0.2$   
(Unit : mm)



### Pin Connection

②



### Electrical and Optical Characteristics

( $T_c=25^\circ\text{C}$ )

Items	Symbols	Min	Type	Max.	Unit	Condition
Optical Output Power	$P_o$	-	100	120	mW	CW
Threshold Current	$I_{th}$	-	35	50	mA	CW
Operating Current	$I_{op}$	-	120	130	mA	$P_o=100\text{mW}$
Slope Efficiency	$\eta$	1.2	1.4	1.9	mW/mA	$P_o=100\text{mW}$
Operating Voltage	$V_{op}$	-	4.8	5.5	V	$P_o=100\text{mW}$
Monitor Current	$I_m$	-	-	-	mA	$P_o=100\text{mW}$
Lasing Wavelength	$\lambda$	400	405	410	nm	$P_o=100\text{mW}$
Beam Divergence	//	7	9	12	$^\circ$	$P_o=100\text{mW}$
	$\perp$	14	19	23	$^\circ$	$P_o=100\text{mW}$
Beam Angle	$\triangle //$	-	-	$\pm 2$	$^\circ$	$P_o=100\text{mW}$
	$\triangle \perp$	-	-	$\pm 3$	$^\circ$	$P_o=100\text{mW}$

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

Note: The above specification is subject to change without notice