



## UVLED365-111E

- Ultraviolet Light Emitting Device
- 365 nm, 5.0 mW
- TO46 Metal Can with Flat Glass Window
- ESD Protection Device
- RoHS Compliant



### Description

UVLED365-111E is an ultraviolet LED, typically emitting at **365 nm** with an optical output power of **5.0 mW**, and narrow bandwidth. It comes in a hermetically sealed TO46 metal can package with flat glass window, and an integrated ESD protection device. UVLED365-111E is typically used for UV curing and fluorescence excitation.

### Maximum Rating ( $T_{CASE} = 25^{\circ}C$ )

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	$P_D$		100	mW
Forward Current	$I_F$		25	mA
Pulse Forward Current*	$I_{FP}$		80	mA
Reverse Current	$I_R$		85	mA
Junction Temperature	$T_J$		+ 100	$^{\circ}C$
Operation Temperature	$T_{OPR}$	- 30	+ 80	$^{\circ}C$
Storage Temperature	$T_{STG}$	- 40	+ 100	$^{\circ}C$

\*  $I_{FP}$  conditions with pulse width  $\leq 10ms$  and duty cycle  $\leq 10\%$



### Electro-Optical Characteristics ( $T_{CASE} = 25^{\circ}C$ , $I_F = 20 mA$ )

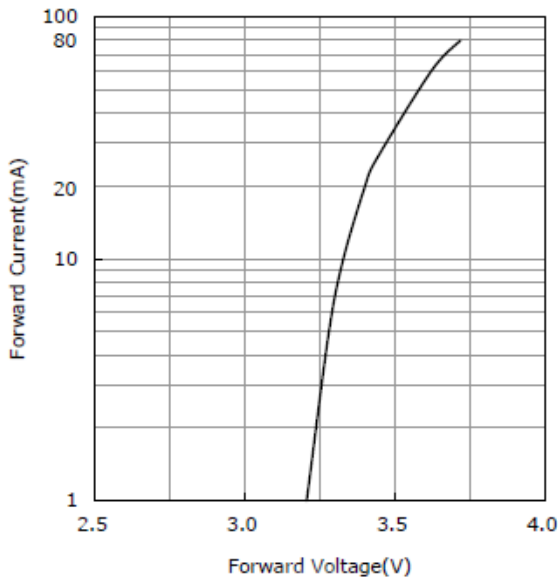
Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	$\lambda_P$	360	<b>365</b>	370	nm
Radiated Power	$P_O$		5.0		mW
Spectral Width (FWHM)	$\Delta\lambda$		12		nm
Forward Voltage	$V_F$	3.0	3.4	3.9	V
Beam Angle	$2\theta_{1/2}$		110		deg.



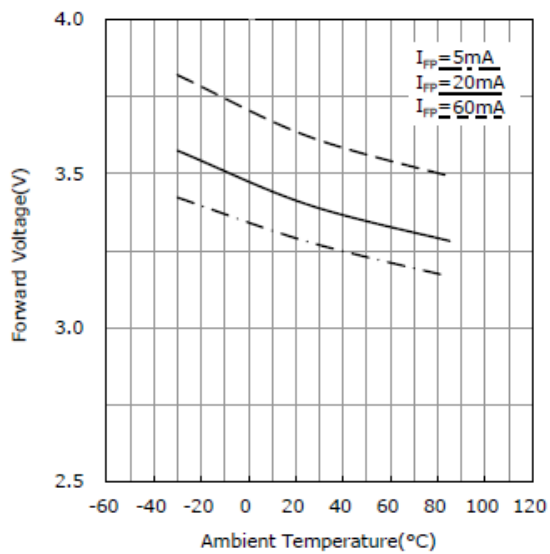


## Performance Characteristics ( $T_{CASE} = 25^{\circ}C$ )

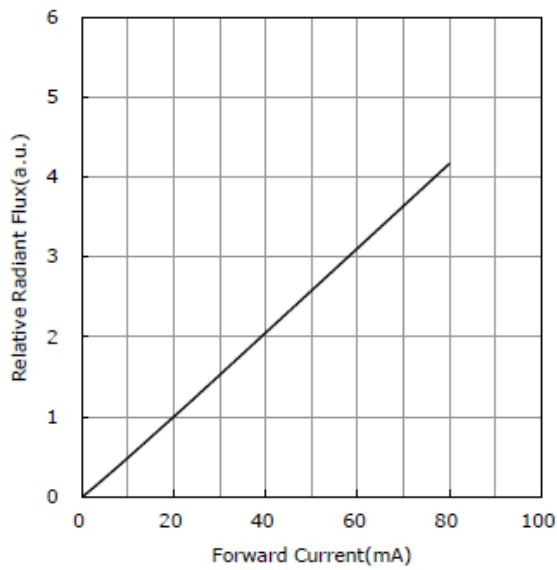
### Forward Current vs. Forward Voltage



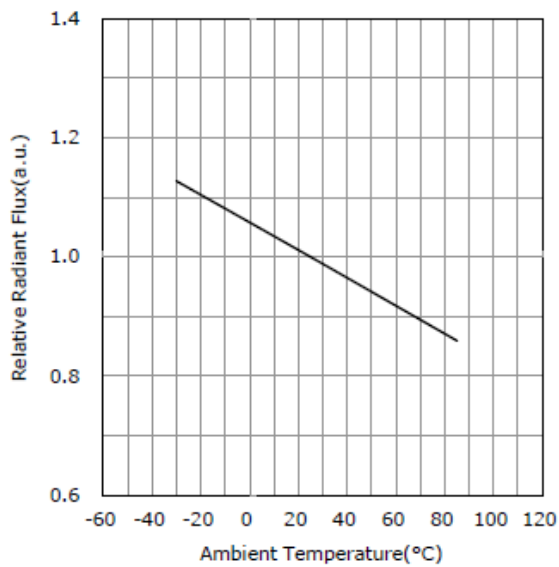
### Forward Voltage vs. Ambient Temperature



### Forward Current vs. Radiant Flux



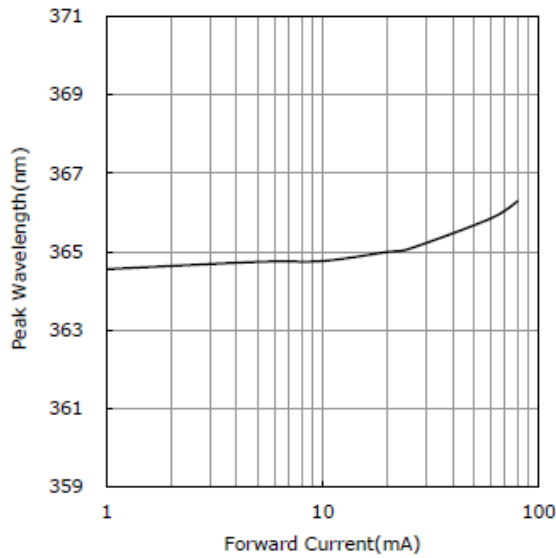
### Ambient Temp. vs. Radiant Flux



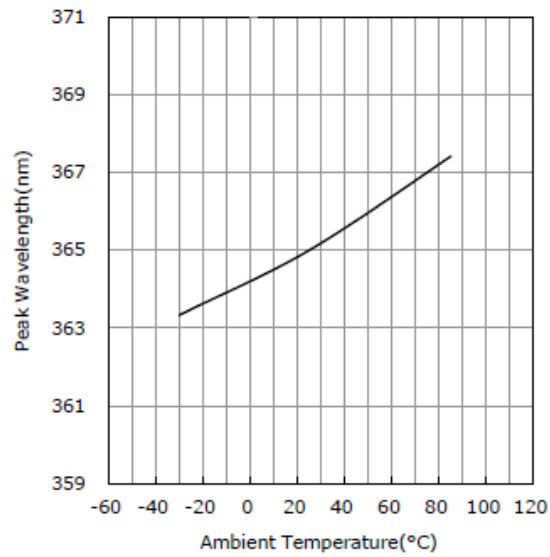


## Performance Characteristics ( $T_{CASE} = 25^{\circ}C$ )

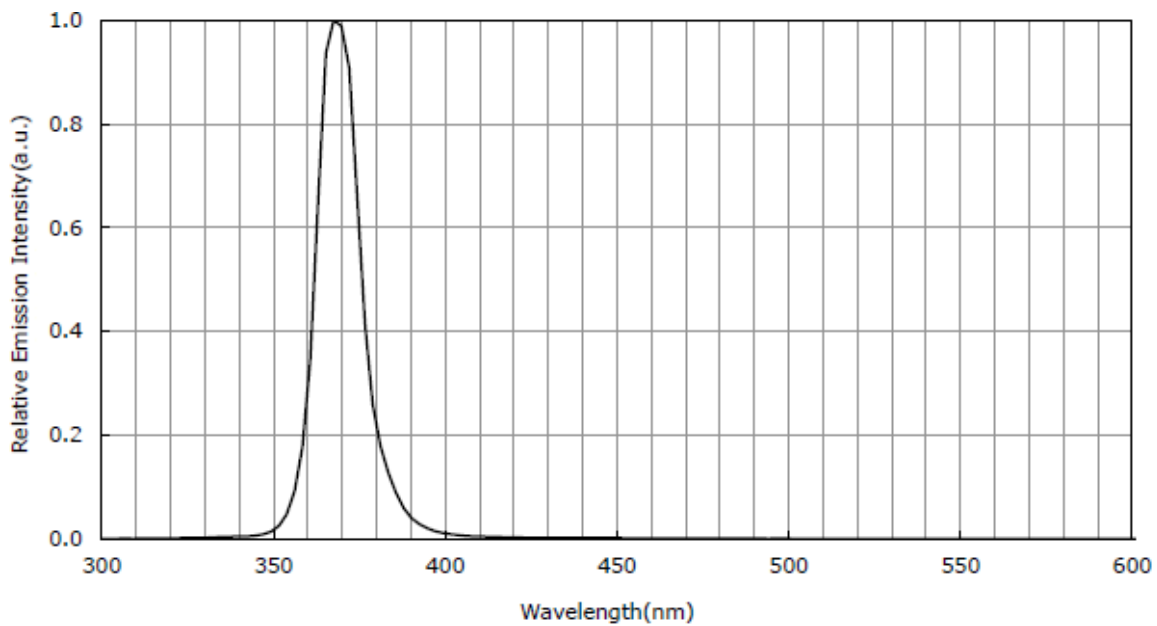
### Forward Current vs. Peak Wavelength



### Ambient Temp. vs. Peak Wavelength

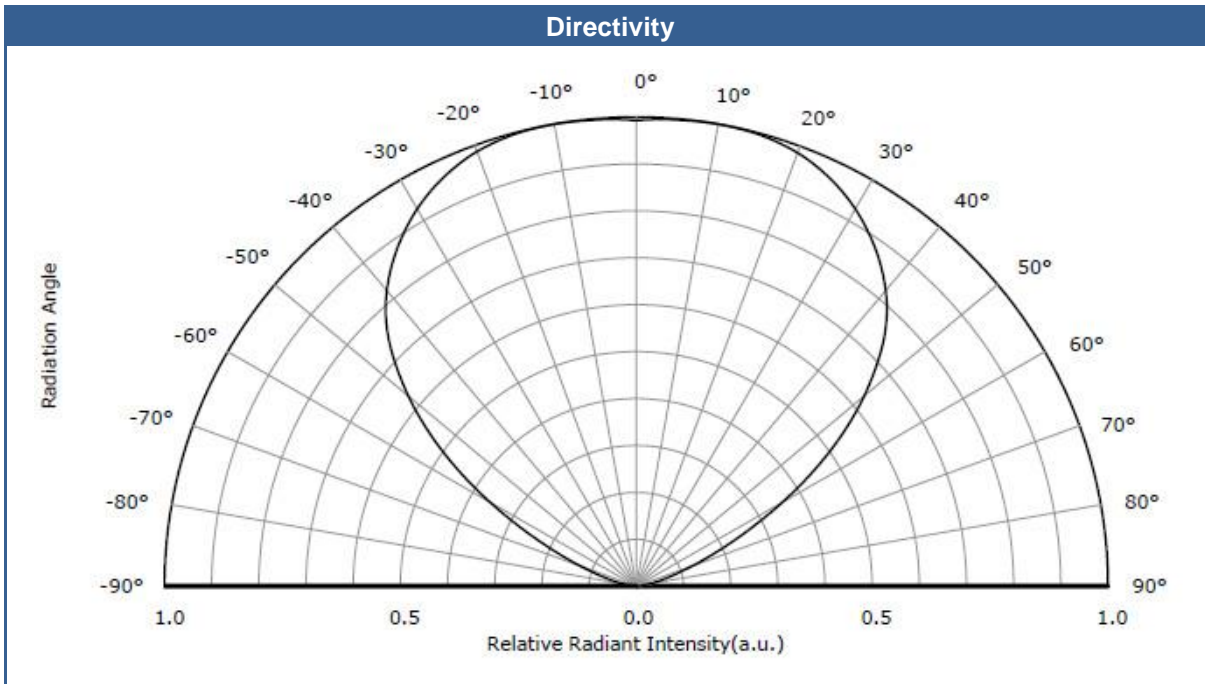


### Spectrum



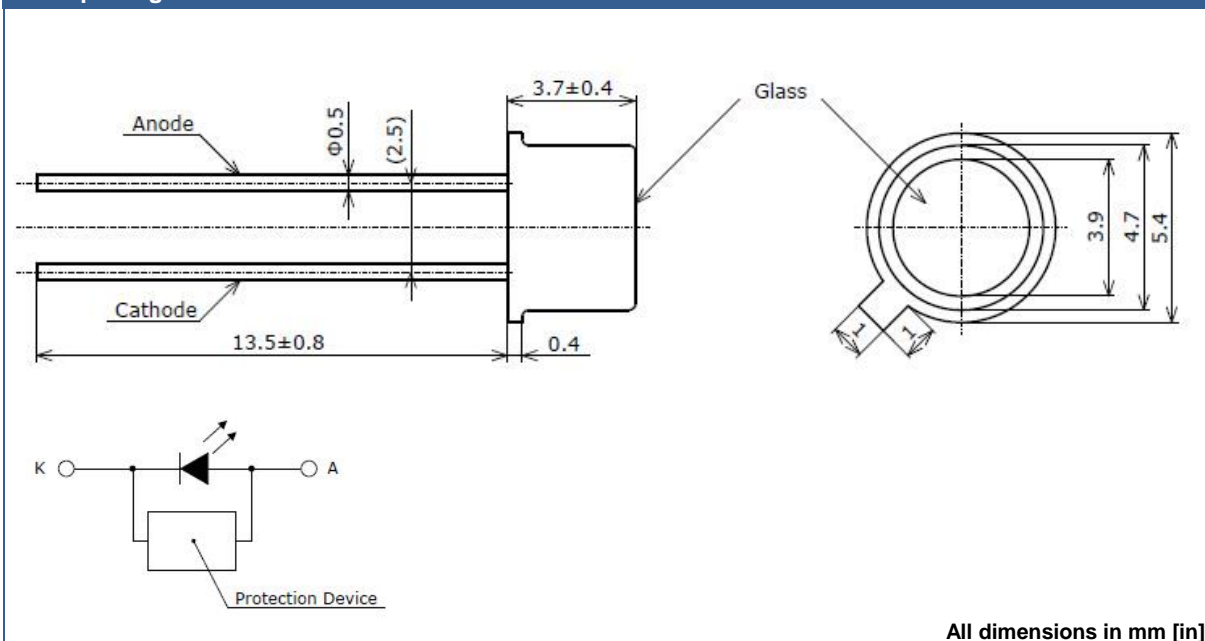


## Performance Characteristics ( $T_{CASE} = 25^{\circ}C$ )



## Outline Dimensions

### TO46 package





## Device Materials

Pin #	Material
Package	Kovar / Ni-plated
Leads	Kovar / Au-plated
Window	Glass

## Soldering

Hand Soldering Recommendation	
Temperature	350 °C max.
Soldering Time	3 s max.
Caution	Min. distance 3 mm from stem

Dip Soldering Recommendation	
Pre-heat	120 °C max.
Pre-heat Time	60 s max.
Solder Bath Temperature	260 °C max.
Dipping Time	10 s max.
Caution	Min. distance 3 mm from stem

## Precautions for Use

### Static Electricity:

LEDs are sensitive to electrostatic discharge (ESD). Precautions against ESD must be taken when handling or operating these LEDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

### UV-Radiation:

During operation these LEDs do emit **high intensity ultraviolet light**, which is hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted UV light. **Protective glasses are recommended.** It is further advised to attach a warning label on products/systems that do utilize UV-LEDs:

### Operation:

- **Do only operate these LEDs with a current source.**  
Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.
- Compliance to the maximum electrical specifications is paramount.

### Storage:

- **Recommended storage temperature:  $\leq 30$  °C**
- **Recommended storage relative humidity:  $\leq 70$  %**