

## Infrared LEDs

### KED085-P02

#### Characteristics

- High output power: 580mW ( $I_F=1A$  with heat sink)
- SMD type package
- Broad directivity

#### Applications

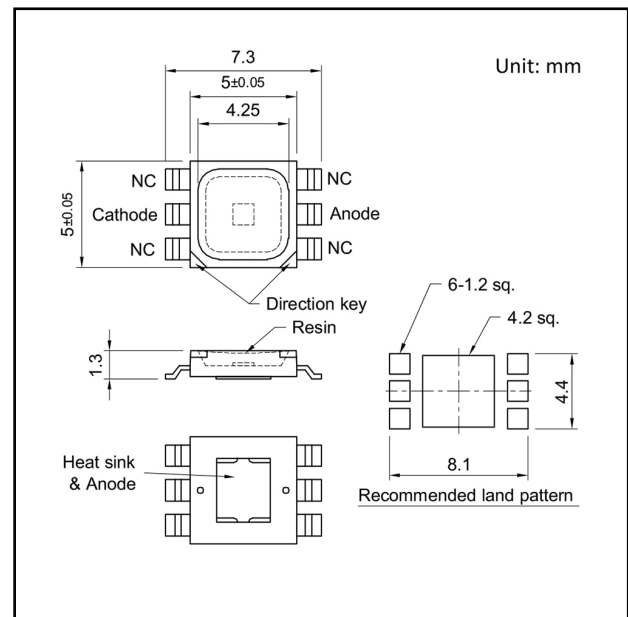
- Infrared illuminations for IR imaging
- Optical switches
- Optical instruments

#### Chip Material

- GaAlAs

#### Package

- SMD



## Absolute Maximum Ratings

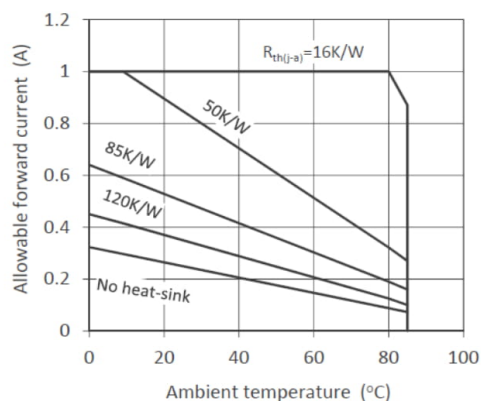
Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	$V_R$	10	V	-
			null	
Forward current	$I_F$	1000 250	mA	$T_a=25^{\circ}\text{C}$ $R_{th(j-a)}=16\text{K/W}$ $T_a=25^{\circ}\text{C}$ No heat-sink
			null	
Dice temperature	$T_j$	115		-
Operating temperature	$T_{opr}$	-20 to +85		Avoid dew condensation
Storage temperature	$T_{stg}$	-30 to +100		Avoid dew condensation

Electrical and Optical characteristics ( $T_a=25^{\circ}\text{C}$   $R_{th(j-a)}=16\text{K/W}$  unless otherwise noted)

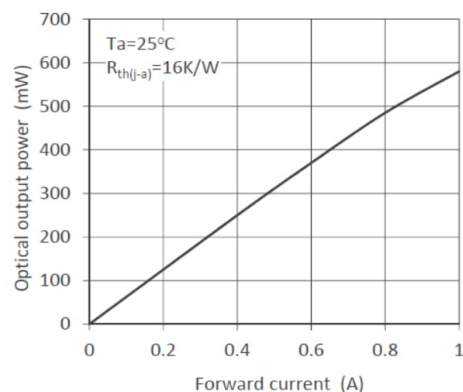
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	$I_R$	-	-	10	$\mu\text{A}$	$V_R=10\text{V}$
Forward voltage	$V_F$	-	2.1 1.4	-1.7	V	$I_F=1\text{A}$ $I_F=100\text{mA}$ No heat-sink
					null	
Optical output power	$P_O$	-	580 60	-	mW	$I_F=1\text{A}$ $I_F=100\text{mA}$ No heat-sink
					null	
Peak wavelength	$\lambda_p$	-	855	-	nm	$I_F=1\text{A}$
					null	
Spectral width		-	25	-	nm	$I_F=1\text{A}$
					null	
Half angle	2	-	130	-	deg.	-
					null	

 $R_{th(j-a)}$ : Thermal resistance from dice to ambient

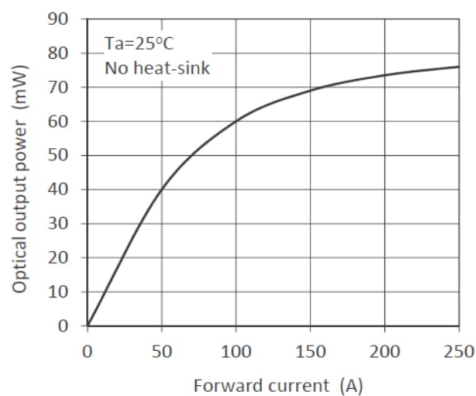
Allowable Forward Current-Ambient Temperature



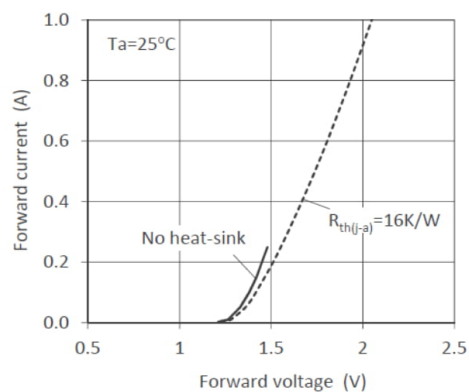
Optical Output Power - Forward Current



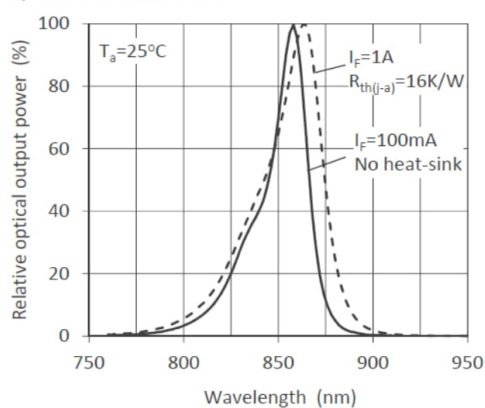
Optical Output Power - Forward Current



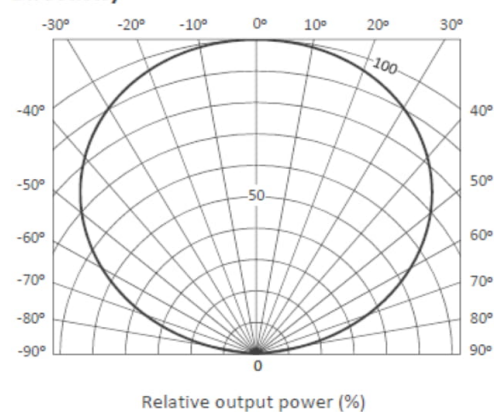
Forward Current - Forward Voltage



Spectral Distribution



Directivity



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