

## Parallel Beam LEDs

# KED358HQ-N

#### Characteristics

- Parallel beam
- High efficiency and high power
- Highly reliable hermetic seal
- Uniform light intensity distribution

## **Applications**

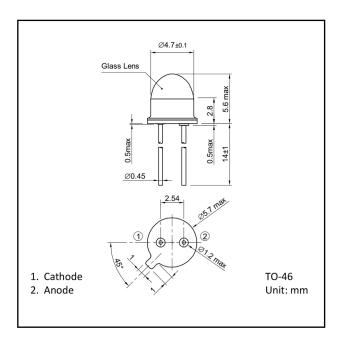
- Optical switches
- Rotary encoders
- Optical sensors

## Chip Material

• GaAlAs

## Package

• TO-CAN





## Absolute Maximum Ratings

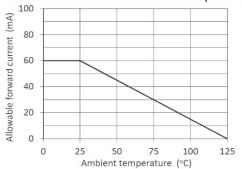
Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V <sub>R</sub>	6	V	-
			null	
Forward current	I <sub>F</sub>	60	mA	- T <sub>a</sub> =25
			null	
Peak forward current	I <sub>FP</sub>	0.6	Α	Pulse width=100µs Duty ratio=0.1%
			null	
Power dissipation	P <sub>D</sub>	100	mW	- T <sub>a</sub> =25
			null	
Operating temperature	T <sub>opr</sub>	-40 to +125		Avoid dew condensation
Storage temperature	T <sub>stg</sub>	-55 to +125		Avoid dew condensation

## Electrical and Optical characteristics (T<sub>a</sub>=25 unless otherwise noted)

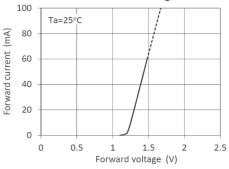
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Reverse Current	I <sub>R</sub>	=	-	10	μA	V <sub>R</sub> =6V
Forward voltage	V <sub>F</sub>	-	1.3	1.5	V	I <sub>F</sub> =20mA
					null	
Optical output power	Po	-	3.0	-	mW	I <sub>F</sub> =20mA
					null	
Peak wavelength	p	-	890	-	nm	I <sub>F</sub> =20mA
					null	
Spectral width		-	50	-	nm	I <sub>F</sub> =20mA
					null	
Half angle	2	-	11	-	deg.	I <sub>F</sub> =20mA
					null	



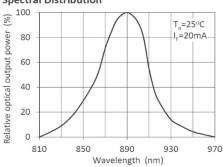
#### Allowable Forward Current-Ambient Temperature



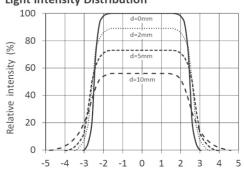
#### Forward Current - Forward Voltage



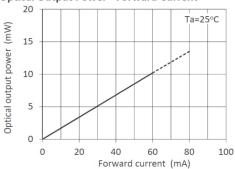
### **Spectral Distribution**



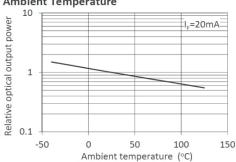
## Light Intensity Distribution



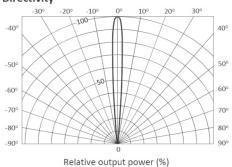
#### **Optical Output Power - Forward Current**



#### Relative Optical Output Power -Ambient Temperature



## Directivity



Optical axis

Detector

\$\delta\$ 0.2 mm

Measurement setup of light intensity distribution



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