

Parallel Beam LEDs

KED050HQ

Characteristics

- Parallel beam
- 50µm dia. emitting area
- Uniform light intensity distribution

Applications

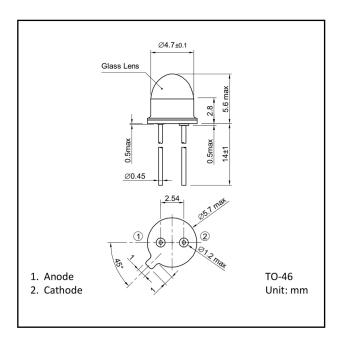
- Rotary encoders
- Linear encoders
- Optical sensors

Chip Material

• GaAlAs

Package

• TO-CAN





Absolute Maximum Ratings

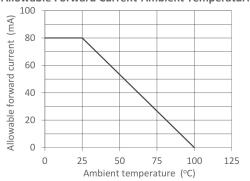
Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	3	V	-
Forward current	I _F	80	mA	T _a =25
Power dissipation	P _D	150	mW	T _a =25
Operating temperature	T _{opr}	-20 to +100		Avoid dew condensation
Storage temperature	T _{stg}	-30 to +100		Avoid dew condensation

Electrical and Optical characteristics (T_a=25 unless otherwise noted)

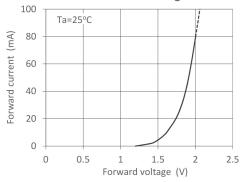
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Reverse Current	I_R	-	-	10	μΑ	V _R =3V
Forward voltage	V _F	-	1.9	2.4	V	I _F =50mA
Optical output power	Po	-	2.4	-	mW	I _F =50mA
Peak wavelength	_	_	855	_	nm	I _F =50mA
Touk wavolongth	р		000			
Spectral width		-	50	-	nm	I ₌ =50mA
						1F-30111A
Half angle	2	-	7.5	-	deg.	1 50m A
						I _F =50mA



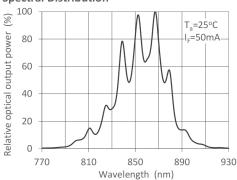
Allowable Forward Current-Ambient Temperature



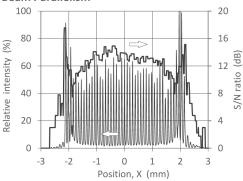
Forward Current - Forward Voltage



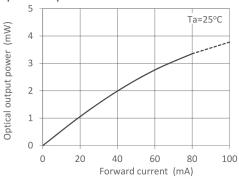
Spectral Distribution



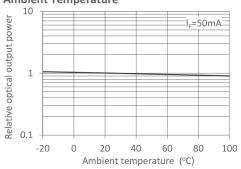
Beam Parallelism



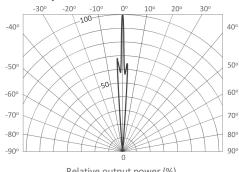
Optical Output Power - Forward Current



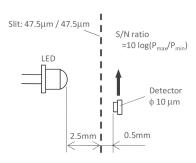
Relative Optical Output Power - Ambient Temperature



Directivity



Relative output power (%)



Measurement setup of beam parallelism



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1724 Shimotsuboyama, Shimotsuke-shi, Tochigi 323-0194, Japan TEL: +81-285-39-7950 https://www.dexerials.jp/en/