

Infrared LEDs

KEDE1454H

Characteristics

- $\lambda = 1450\text{nm}$
- High output power
- Flat glass window
- Highly reliable hermetic seal
- Direct modulation

Applications

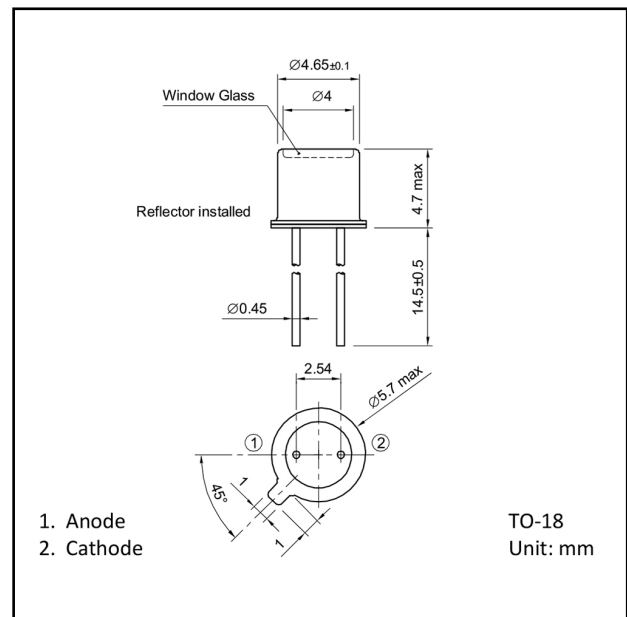
- Optical switches
- Optical instruments
- Water sensors
- Humidity analysis

Chip Material

- InGaAsP

Package

- TO-CAN



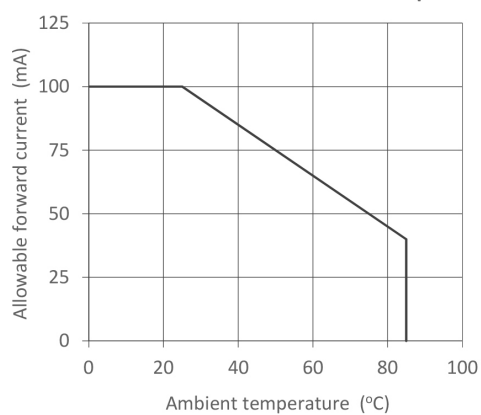
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	5	V	-
Forward current	I_F	100	mA	$T_a=25$
Peak forward current	I_{FP}	1.0	A	Pulse width=100 μ s Duty ratio=0.1%
Power dissipation	P_D	130	mW	$T_a=25$
Operating temperature	T_{opr}	-30 to +85		Avoid dew condensation
Storage temperature	T_{stg}	-40 to +100		Avoid dew condensation

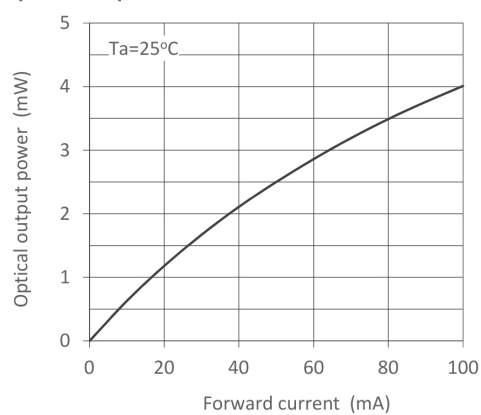
Electrical and Optical characteristics ($T_a=25$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	I_R	-	-	10	μ A	$V_R=1V$
Forward voltage	V_F	-	0.8	1.3	V	$I_F=50mA$
Optical output power	P_O	-	2.5	-	mW	$I_F=50mA$
Peak wavelength	λ_p	1400	1450	1500	nm	$I_F=50mA$
Spectral width		-	100	-	nm	$I_F=50mA$
Half angle	2	-	80	-	deg.	$I_F=50mA$

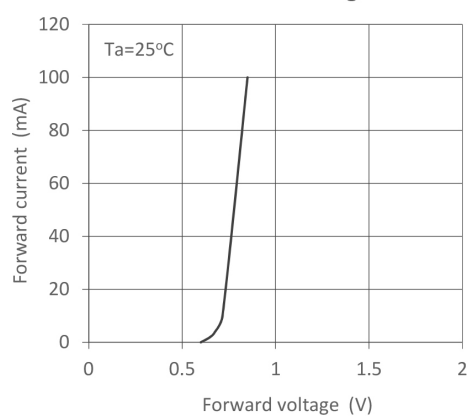
Allowable Forward Current-Ambient Temperature



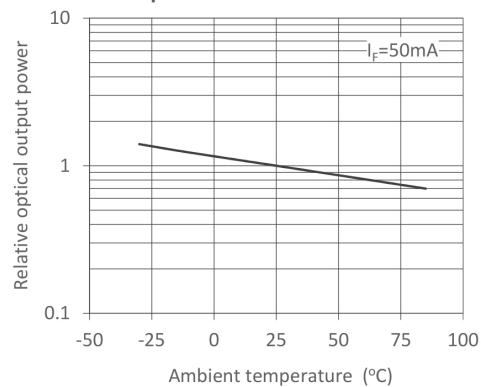
Optical Output Power - Forward Current



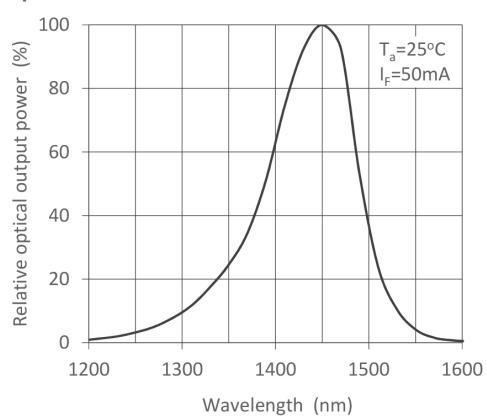
Forward Current - Forward Voltage



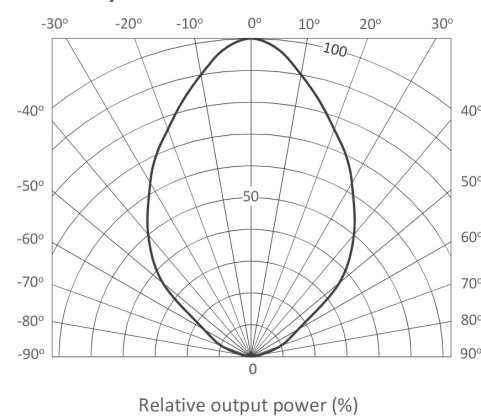
Relative Optical Output Power - Ambient Temperature



Spectral Distribution



Directivity



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