

## Parallel Beam LEDs

### KED308HV

#### Characteristics

- Parallel beam
- High output power
- Uniform light intensity distribution

#### Applications

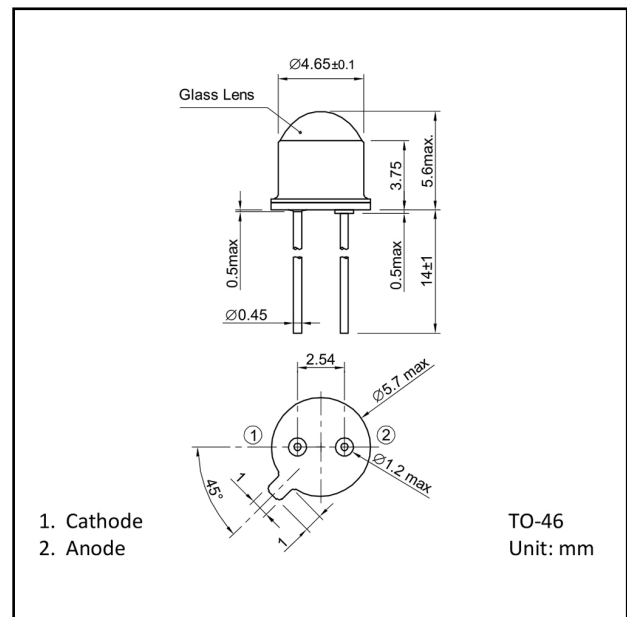
- Rotary encoders
- Linear encoders
- Optical sensors

#### Chip Material

- GaAlAs

#### Package

- TO-CAN



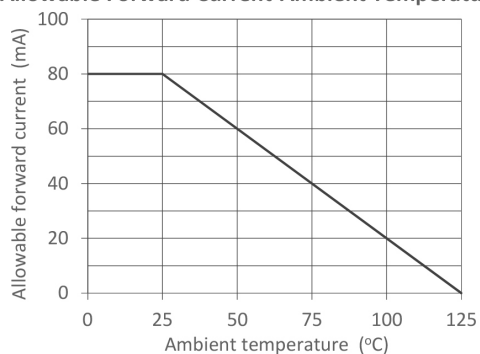
## Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	$V_R$	5	V	-
Forward current	$I_F$	80	mA	
Power dissipation	$P_D$	140	mW	$T_a=25$
Operating temperature	$T_{opr}$	-40 to +125		Avoid dew condensation
Storage temperature	$T_{stg}$	-40 to +125		Avoid dew condensation

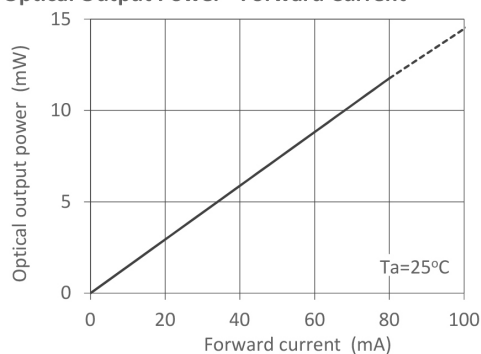
Electrical and Optical characteristics ( $T_a=25$  unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Current	$I_R$	-	-	10	$\mu A$	$V_R=5V$
Forward voltage	$V_F$	-	1.6	2.0	V	$I_F=50mA$
Optical output power	$P_O$	-	7	-	mW	$I_F=50mA$
Peak wavelength	$\lambda_p$	-	870	-	nm	$I_F=50mA$
Spectral width		-	50	-	nm	$I_F=50mA$
Half angle	2	-	8	-	deg.	$I_F=50mA$

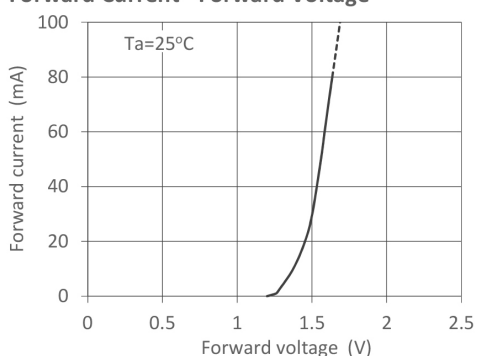
Allowable Forward Current-Ambient Temperature



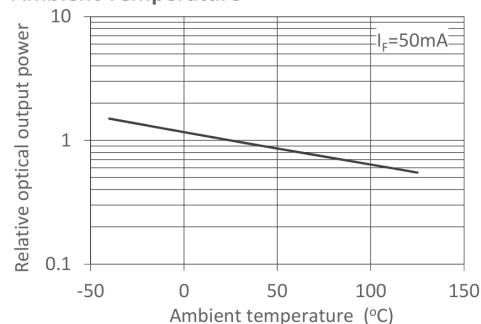
Optical Output Power - Forward Current



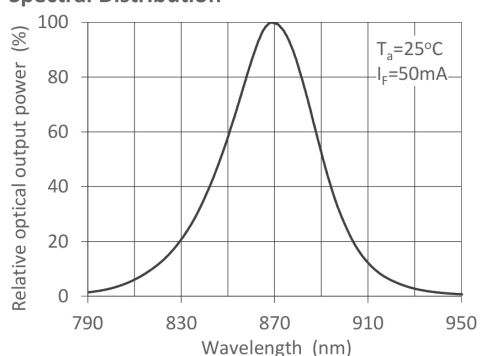
Forward Current - Forward Voltage



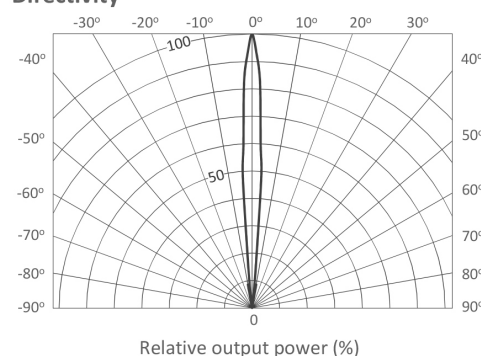
Relative Optical Output Power - Ambient Temperature



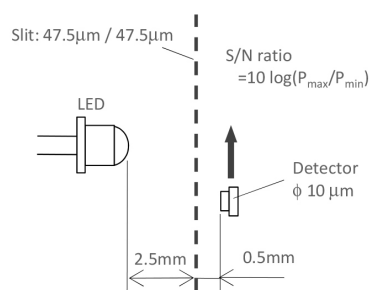
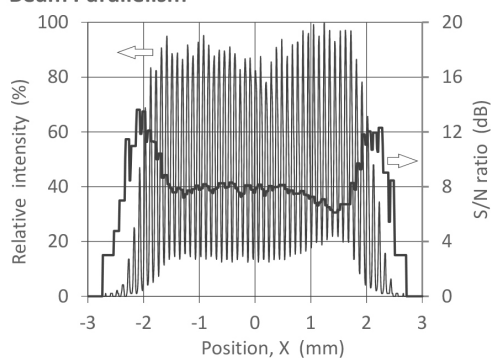
Spectral Distribution



Directivity



Beam Parallelism



Measurement setup of beam parallelism

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