



L9338

For optical switches

The L9338 is an infrared LED developed for optical switches and is available at a low cost due to the improved manufacturing process.

Features

- High reliability
- Low price

Applications

- Optical switches

Absolute maximum ratings (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V _R		5	V
Forward current	I _F		80	mA
Forward current reduction rate	-	Ta>25 °C	1.1	mA/°C
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1%	1.0	A
Pulse forward current reduction rate	-	Ta>25 °C	13	mA/°C
Power dissipation	P		150	mW
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}		-40 to +100 *1	°C

*1: Guaranteed to resist temperature cycle test of up to 5 cycles

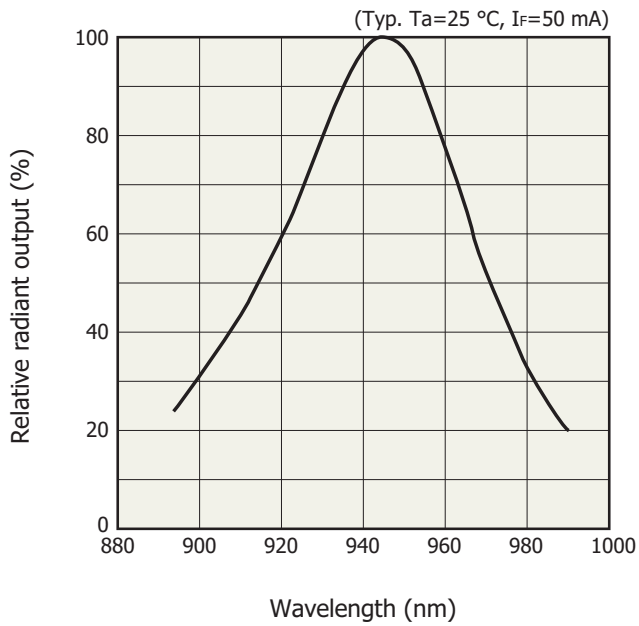
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

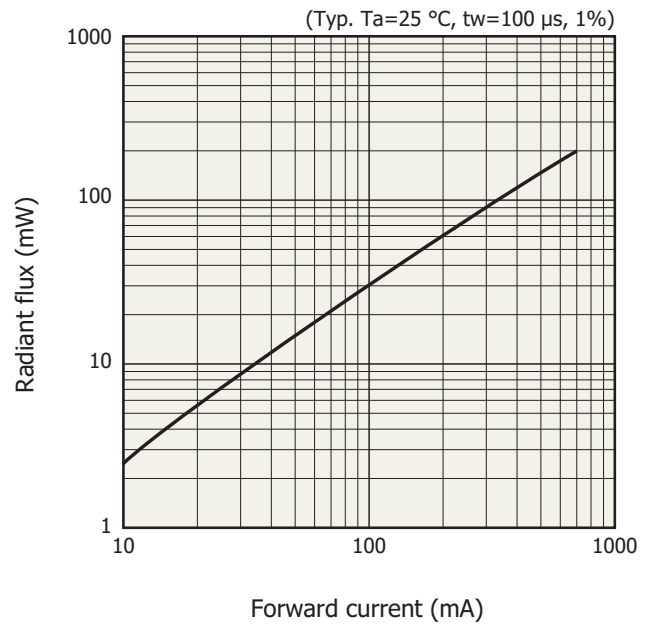
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ _p	I _F =50 mA	920	945	970	nm
Spectral half width	Δλ	I _F =50 mA	-	60	-	nm
Forward voltage	V _F	I _F =50 mA	-	1.34	1.42	V
Pulse forward voltage	V _{FP}	I _F =1 A	-	3.1	3.8	V
Reverse current	I _R	V _R =5 V	-	-	5	μA
Radiant flux	φ _e	I _F =50 mA	10	15	-	mW
Cutoff frequency*2	f _c	I _F =50 mA ± 4 mAp-p	0.1	0.3	-	MHz

*2: Frequency at which the optical output drops by 3 dB from that at 10 kHz

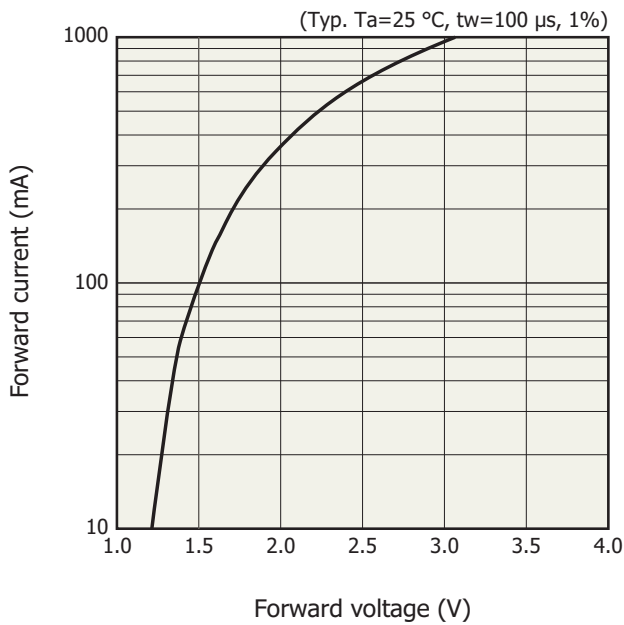
Emission spectrum



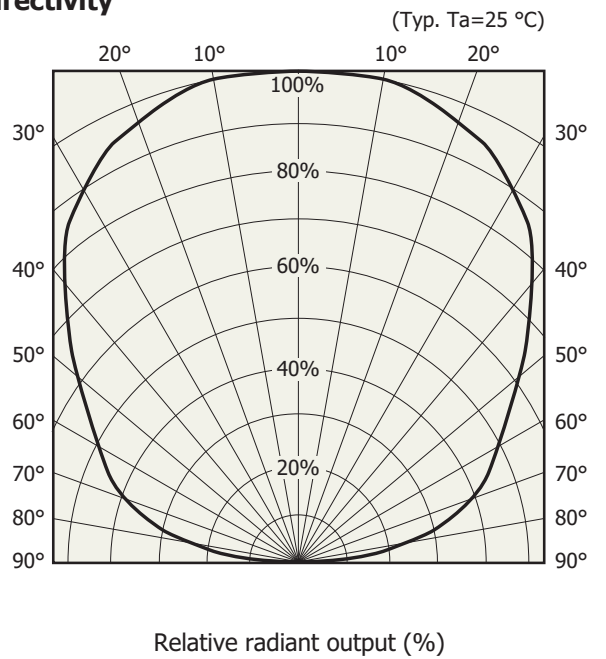
Radiant flux vs. forward current



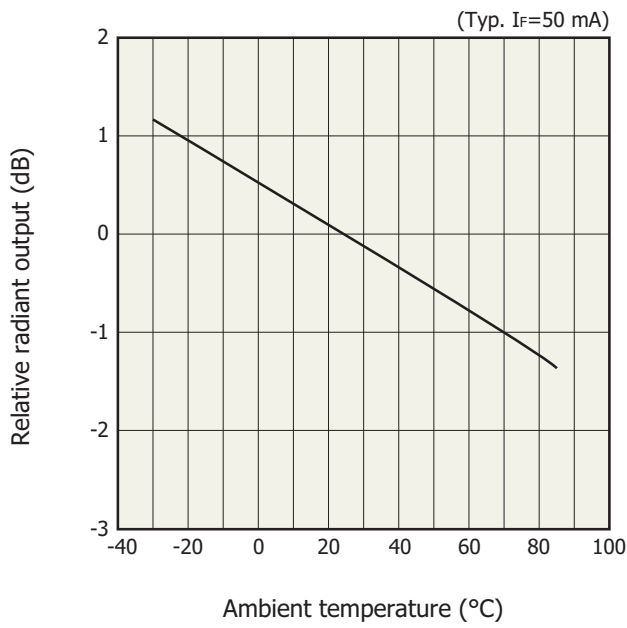
Forward current vs. forward voltage



Directivity

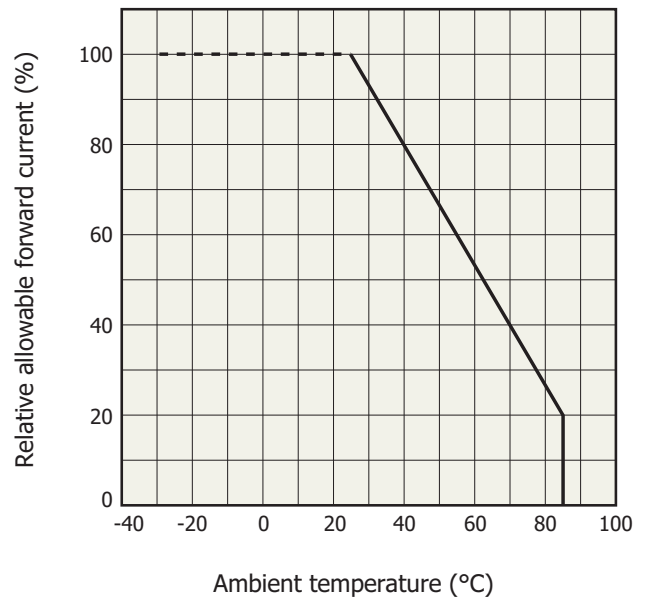


❑ Radiant output vs. ambient temperature



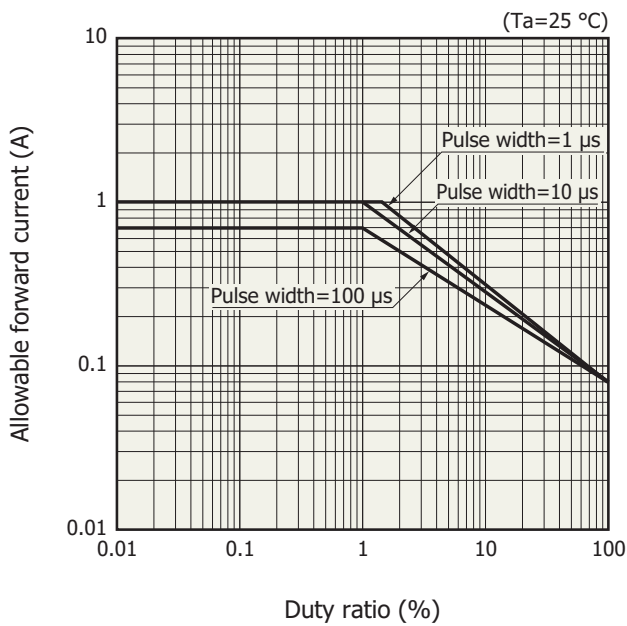
KLEDB0259EA

❑ Allowable forward current vs. ambient temperature



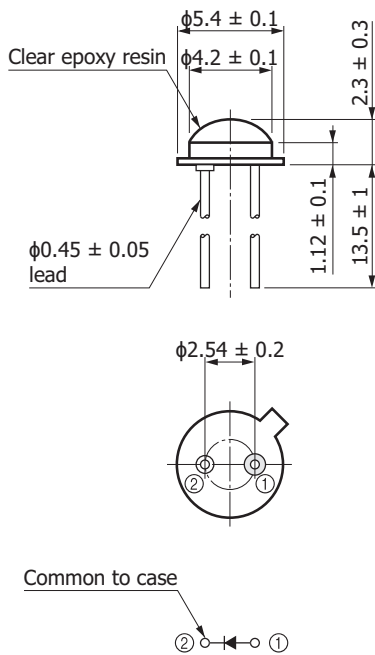
KLEDB0254EB

❑ Allowable forward current vs. duty ratio



KLEDB0038EB

Dimensional outline (unit: mm)



KLEDA0081EA

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

Precautions

- Disclaimer
- Metal, ceramic, plastic products

Information described in this material is current as of November, 2015.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

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