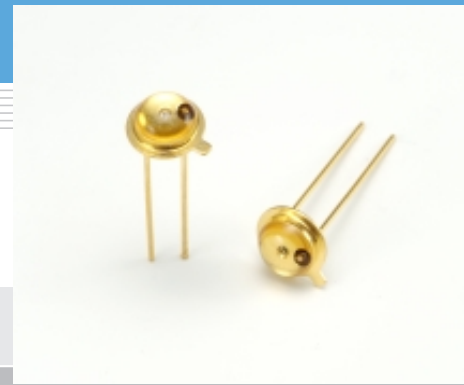


Infrared LED

L9338

For optical switches



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	VR		5	V
Forward current	IF		80	mA
Forward current reduction rate	-	Ta>25 °C	1.1	mA/°C
Pulse forward current	IFP	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	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100 *1	°C

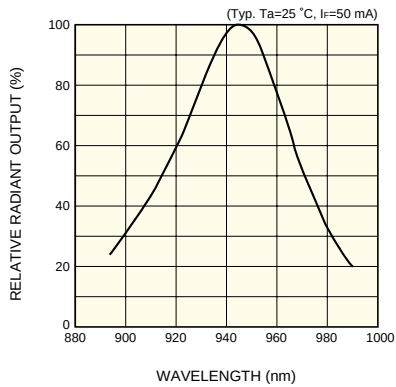
*1: Guaranteed to resist temperature cycle test of up to 5 cycles.

■ Electrical and optical characteristics (Ta=25 °C)

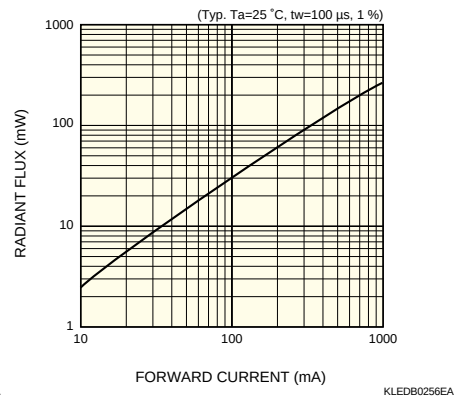
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_p	IF=50 mA	920	945	970	nm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	60	-	nm
Forward voltage	VF	IF=50 mA	-	1.34	1.42	V
Pulse forward voltage	VFP	IF=1 A	-	3.1	3.8	V
Reverse current	IR	VR=5 V	-	-	5	μA
Radiant flux	ϕ_e	IF=50 mA	10	15	-	mW
Cut-off frequency *2	fc	IF=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.

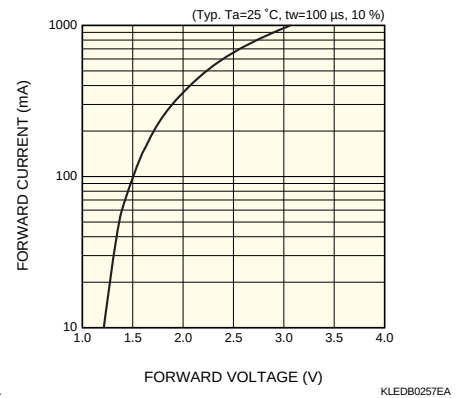
■ Emission spectrum



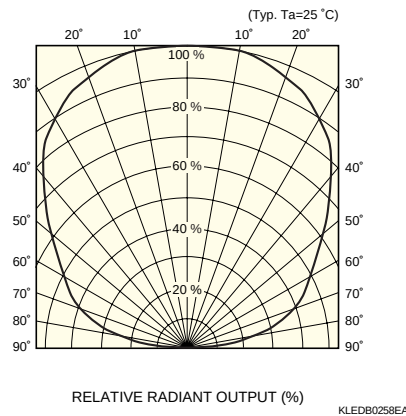
■ Radiant flux vs. forward current



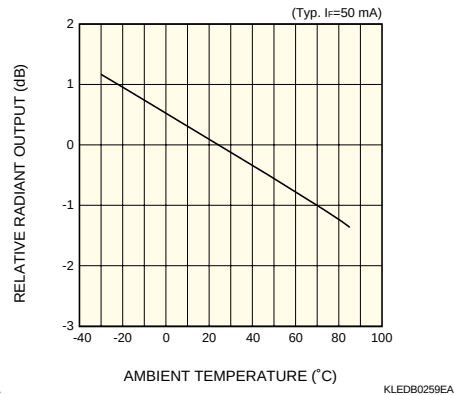
■ Forward current vs. forward voltage



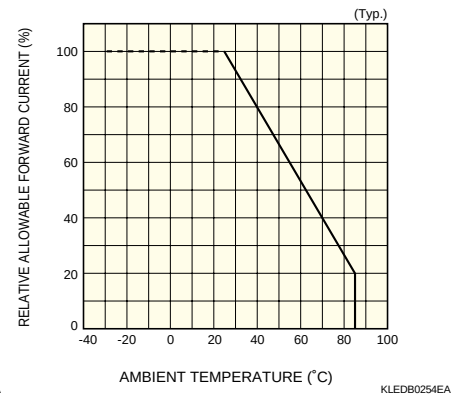
■ Directivity



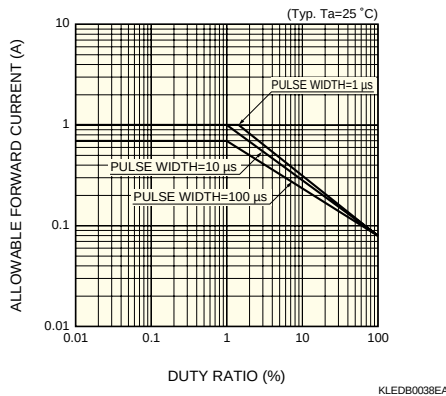
■ Radian output vs. ambient temperature



■ Allowable forward current vs. ambient temperature



■ Allowable forward current vs. duty ratio



■ Dimensional outline (unit: mm)

