

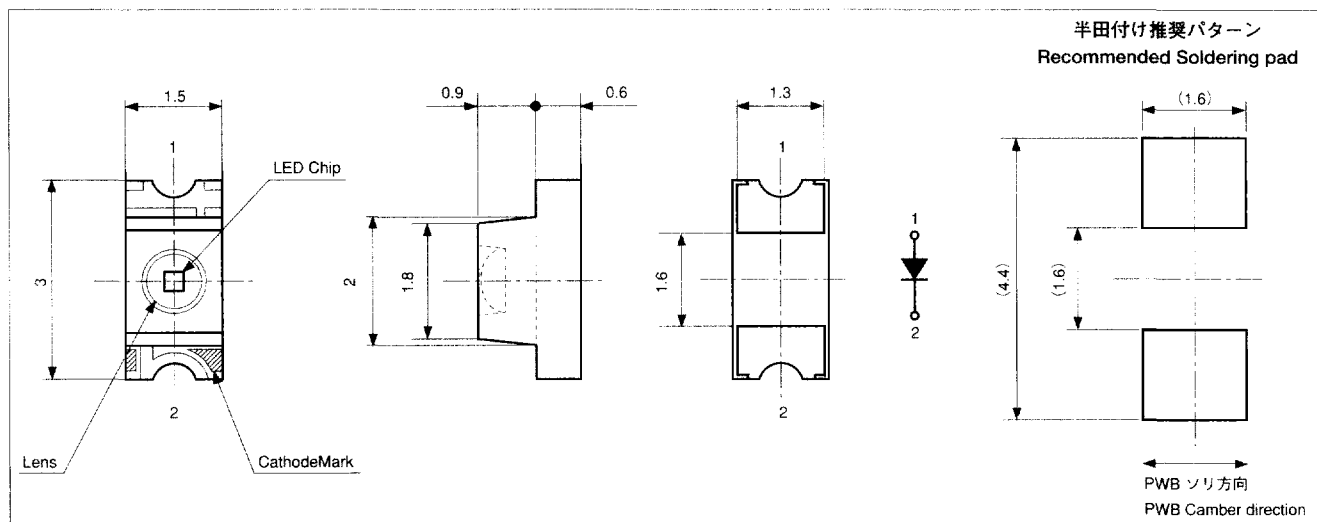


# 高出力赤外チップタイプ LED / Surface Mount Infrared LED

# AN1102W

## 外形寸法 PACKAGE DIMENSIONS

Unit : mm



一般寸法公差 : ±0.2mm  
Tolerances : ±0.2mm

## 特長 FEATURES

- 発光波長は950nm。
- 広指向性 ( $\Delta\theta = 60\text{deg.}$ ) タイプ。
- 高密度実装が可能。
- 実装方法としてリフロー、半田ディップに対応。
- The peak wavelength is 950nm.
- Wide-directional type ( $\Delta\theta = 60\text{deg.}$ ).
- Tape and reel packaging.
- Designed for reflow and solder dip soldering methods.

## 絶対最大定格 ABSOLUTE MAXIMUM RATINGS

( $T_a = 25^\circ\text{C}$ )

項目 Item	記号 Symbol	最大定格 Maximum Ratings	単位 Units
許容損失 Power Dissipation	Pd	75	mW
順電流 Forward Current	I <sub>F</sub>	50	mA
順電流低減率( $T_a = 25^\circ\text{C}$ 以上) Derate Linearly From 25°C		0.67	mA/°C
尖頭順電流 Peak Forward Current	I <sub>FM</sub>	300	mA
逆電流 Reverse Voltage	V <sub>R</sub>	5	V
動作温度 Operating Temperature	T <sub>opr</sub>	-30 ~ +85	°C
保存温度 Storage Temperature	T <sub>stg</sub>	-30 ~ +90	°C
半田温度 Lead Soldering Temperature	T <sub>sol</sub>	260°C for 5seconds	

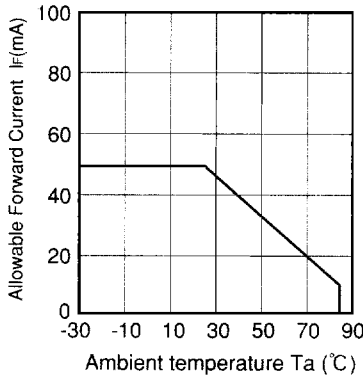
- I<sub>FM</sub> の条件 : Pulse  $t_w \leq 100 \mu\text{sec}$ , Duty  $\leq 1/100$
- I<sub>FM</sub> applies for the condition :  $t_w \leq 100 \mu\text{sec}$  and duty cycle  $\leq 1/100$

## 電氣的・光学的特性 ELECTRO-OPTICAL CHARACTERISTICS

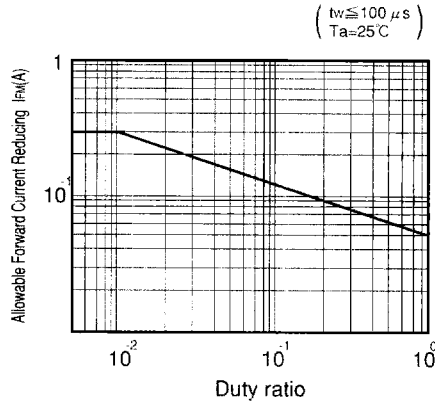
( $T_a = 25^\circ\text{C}$ )

項目 Item	記号 Symbol	条件 Conditions	MIN.	TYP.	MAX.	単位 Units
順電圧 Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	—	1.22	1.4	V
逆電流 Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V			10	μA
接合容量 Capacitance	C <sub>o</sub>	V = 0V, f = 1MHz		20		pF
放射強度 Axial Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> = 20mA	0.5	0.8	—	mW/sr
光出力 Total Power	P <sub>O</sub>	I <sub>F</sub> = 20mA		2.0		mW
ピーク発光波長 Peak Wave Length	λ <sub>p</sub>	I <sub>F</sub> = 20mA		950		nm
スペクトル半幅幅 Spectral Line Half Width	Δλ	I <sub>F</sub> = 20mA		45		nm
指向半値角 Half Intensity Angle	Δθ	I <sub>F</sub> = 20mA		60		deg
立ち上がり時間 Response Time (Rise)	t <sub>r</sub>	I <sub>F</sub> = 20mA		700		ns
立ち下がり時間 Response Time (Fall)	t <sub>f</sub>	I <sub>F</sub> = 20mA		700		ns
遮断周波数 Cut-off Frequency	f <sub>c</sub>	I <sub>F</sub> = 20mA DC + 10mA p-p -3dB from 0.1MHz		0.5		MHz

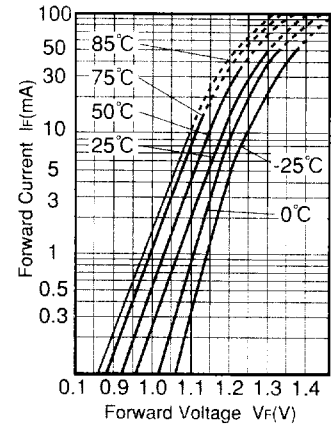
■最大許容電流－周囲温度特性  
Allowable Forward current reducing  
Ambient Temperature



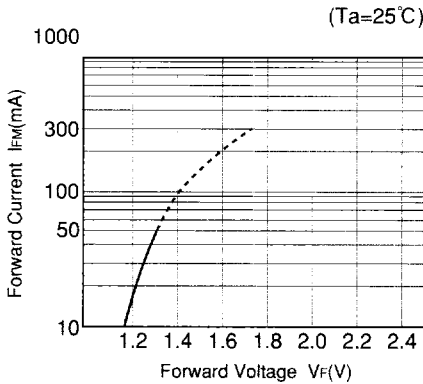
■順電流－デューティー比  
Allowable forward current reducing -  
Duty ratio



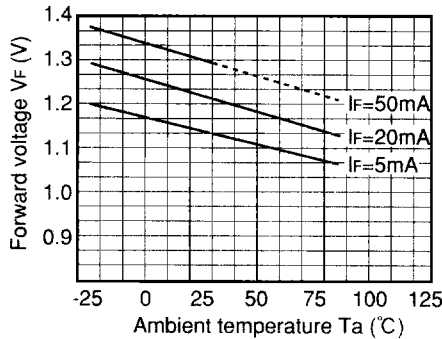
■順電流－順電圧特性  
Forward current -  
Forward voltage Characteristics



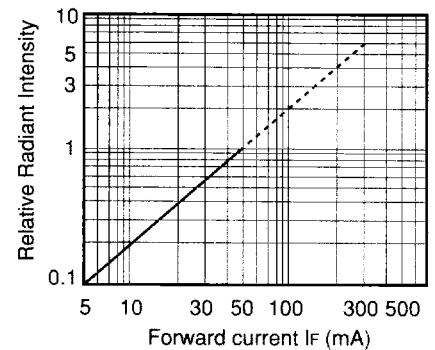
■順電流－順電圧特性  
Forward current -  
Forward voltage characteristics



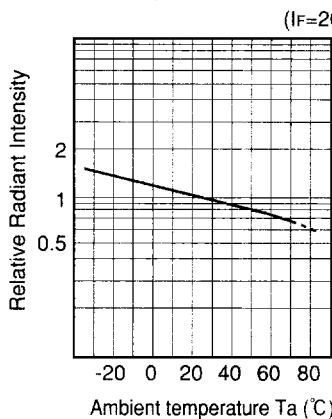
■順電圧－周囲温度特性  
Forward voltage -  
Ambient temperature characteristics



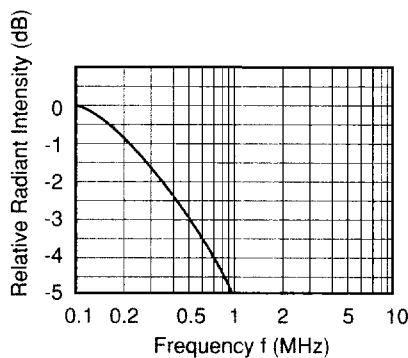
■順電流－相对光出力特性  
Forward current -  
Relative Radiant Intensity



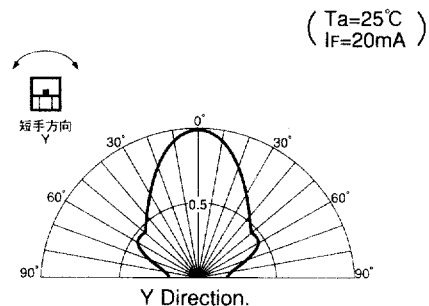
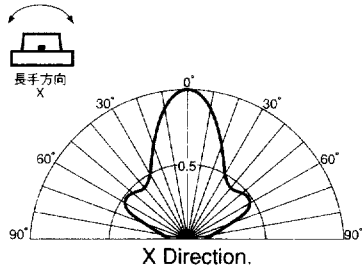
■相对光出力－周囲温度特性  
Relative Radiant Intensity-  
Ambient temperature characteristics



■周波数特性  
Frequency characteristics



■指向特性图代表例  
Example of Spatial Distribution



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