

# HPI - 1K1 · HPI - 1K3

The HPI - 1K1 and HPI - 1K3 are PIN photodiodes for fiber optic receivers, mounted in a durable, hermetically sealed TO - 18 metal can package, which offer high - speed response and high output. HPI - 1K1 cathode connected to metal case. Each HPI - 1K3 lead pin is isolated from metal case.

**FEATURES**

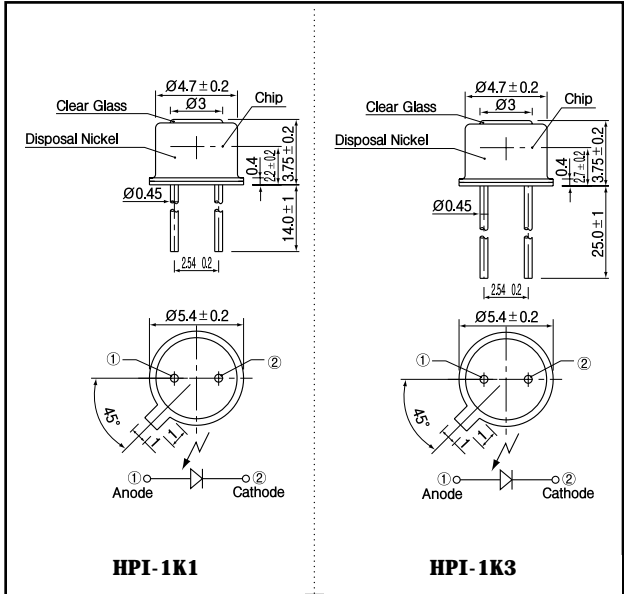
- High - output power
- High - speed response
- Durable
- High reliability in demanding environments
- Narrow angular response

**APPLICATIONS**

- Fiber optic communications
- Optical switches

**DIMENSIONS**

(Unit : mm)



**MAXIMUM RATINGS**

(Ta=25 )

Item	Symbol	Rating		Unit
		HPI - 1K1	HPI - 1K3	
Reverse voltage	$V_R$	40	40	V
Power dissipation	$P_D$	100	100	mW
Operating temp.	$T_{opr.}$	- 30 ~ + 100	- 25 ~ + 100	
Storage temp.	$T_{stg.}$	- 40 ~ + 110	- 40 ~ + 110	
Soldering temp. *1	$T_{sol.}$	260	260	

\*1.For MAX.5 seconds at the position of 2 mm from the package

(Ta=25 )

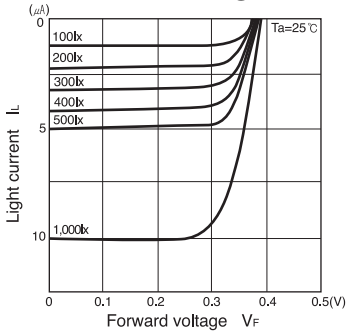
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	$V_{oc}$	$E_v = 1,000lx^2$		0.38		V
Short circuit current	$I_{sc}$			10		$\mu A$
Sensitivity	S			0.4		A/W
Dark current	$I_d$	$V_R = 1V$			10	nA
Curve factor	C.F.		0.55			-
Capacitance	$C_t$	$V = 0V, f = 1MHz$		10		pF
Temperature coefficient of $V_{oc}$	t			- 2.2		mV/
Temperature coefficient of $I_{sc}$	t			0.18		%/
Spectral sensitivity				450 ~ 1,050		nm
Peak wavelength	$\lambda_p$			920		nm
Half angle				± 50		deg.

\*2.Color temp. =2856K standard Tungsten lamp

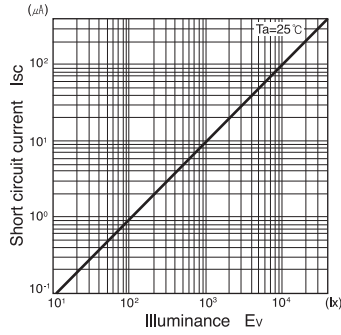
**PIN Photodiode**

**HPI - 1K1 · HPI - 1K3**

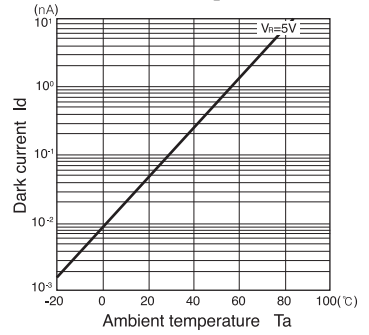
**Light current Vs. Forward voltage**



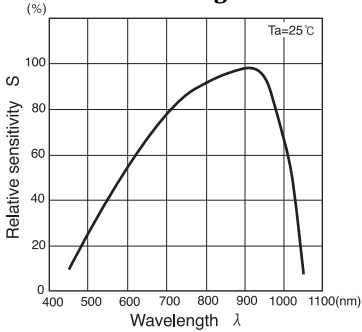
**Short circuit current I\_sc Vs. Illuminance E\_v**



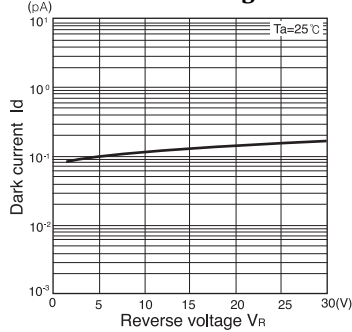
**Dark current I\_d Vs. Ambient temperature T\_a**



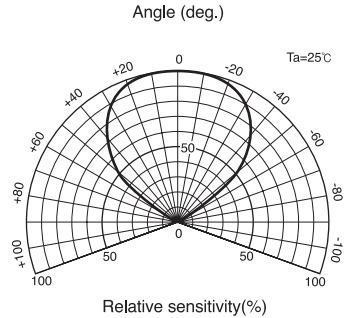
**Relative sensitivity S Vs. Wavelength λ**



**Dark current I\_d Vs. Reverse voltage V\_R**



**Radiant Pattern**



**Capacitance between terminals C\_t Vs. Reverse voltage V\_R**

