

## HP - 5FR2

The HP - 5FR2 is a high - output, high - speed silicon photodiode mounted in a sidelooking plastic package with daylight filter. The HP - 5FR3 and HP - 5FR4 photodiode with a different daylight filter(IR - 88 type), are available in the same package.

**FEATURES**

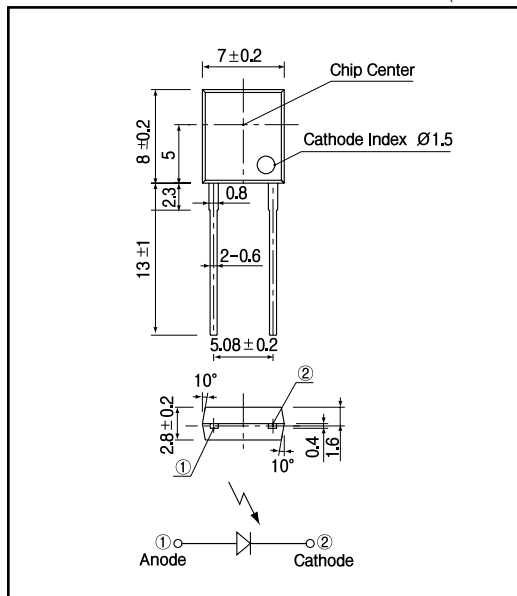
- High - output power for IRED
- High - speed response
- Wide angular response
- Relatively low - cost against metal can package
- Sidelooking plastic package with daylight filter

**APPLICATIONS**

- Remote control sensors
- Optical switches
- Photocouplers

**DIMENSIONS**

(Unit : mm)

**MAXIMUM RATINGS**

(Ta=25 °C)

Item	Symbol	Rating	Unit
Reverse voltage	$V_R$	35	V
Power dissipation	$P_D$	150	mW
Operating temp.	$T_{opr.}$	- 30 ~ + 70	
Storage temp.	$T_{stg.}$	- 40 ~ + 80	
Soldering temp. **	$T_{sol.}$	260	

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

**ELECTRO-OPTICAL CHARACTERISTICS**

(Ta=25 °C)

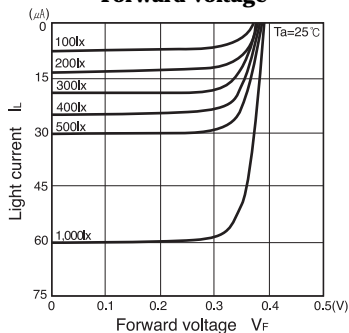
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	$V_{oc}$	$E_v = 1,000lx^{-2}$		0.38		V
Short circuit current	$I_{sc}$		40	60		$\mu A$
Dark current	$I_d$	$V_R = 10V$			30	nA
Curve factor	C.F.		0.55			-
Capacitance	Ct	$V = 0V, f = 1MHz$		175		pF
Temperature coefficient of $V_{oc}$	t			- 2.2		mV/°C
Temperature coefficient of $I_{sc}$	t			0.18		%/°C
Spectral sensitivity				700 ~ 1,050		nm
Peak wavelength	p			940		nm
Half angle				± 70		deg.

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

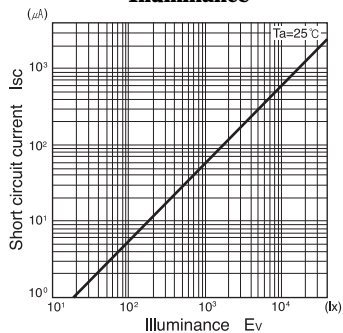
## Photo diodes

HP - 5FR2

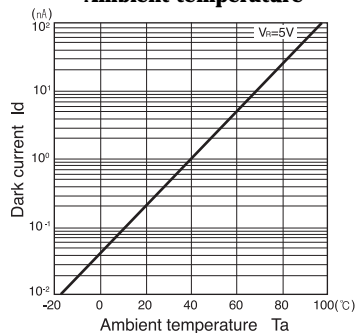
**Light current Vs. Forward voltage**



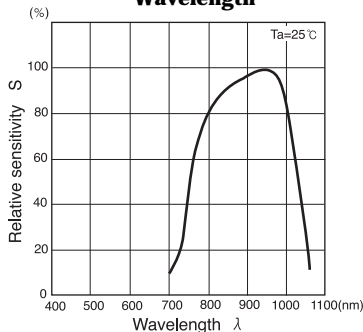
**Short circuit current Vs. Illuminance**



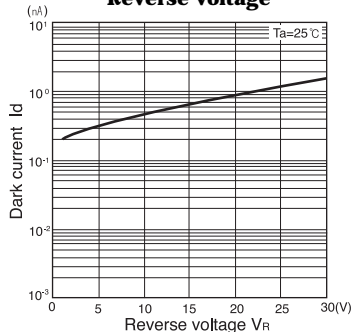
**Dark current Vs. Ambient temperature**



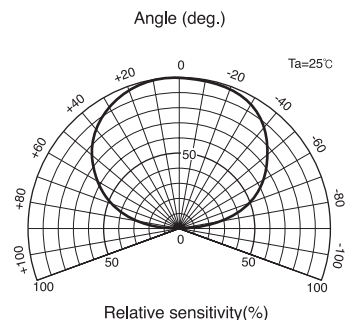
**Relative sensitivity Vs. Wavelength**



**Dark current Vs. Reverse voltage**



**Radiant Pattern**



**Capacitance between terminals Vs. Reverse voltage**

