

Photo diodes

KODENSHI

HP - 3ML · HP - 3MLR2

The HP - 3ML is a high - output, high - speed photodiode mounted in a TO - 18 type header with clear epoxy encapsulation, The HP - 3MLR2 photodiode, with daylight filter, is available in the same package.

FEATURES

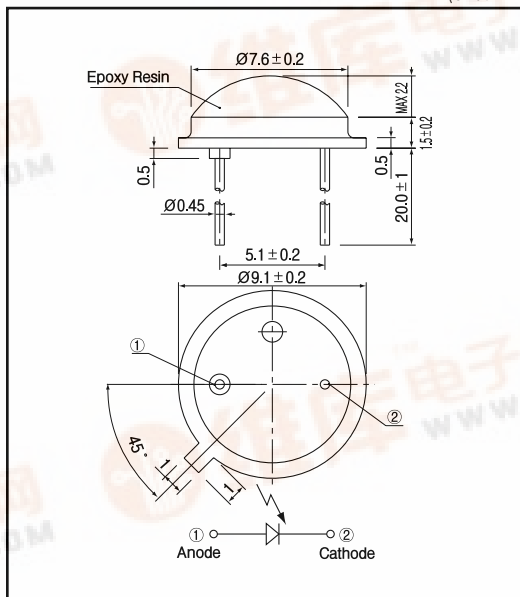
- High - output power
- High - speed response
- Wide angular response
- Relatively low - cost against metal can package

APPLICATIONS

- Optical detectors
- Optical switches

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	5	V
Operating temp.	T_{opr}	- 20 ~ + 80	°C
Storage temp.	T_{stg}	- 30 ~ + 100	°C
Soldering temp. ^{*1}	T_{sol}	260	°C

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Conditions	HP - 3ML			HP - 3MLR2			Unit.
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Open circuit voltage	V_{oc}	$E_v = 1,000lx^{*2}$		0.38			0.30		V
Short circuit current	I_{sc}		54	75			60		μA
Dark current	I_d	$V_R = 5V$			1			10	μA
Curve factor	C.F.		0.55			0.55			-
Capacitance	C_t	$V = 0V, f = 1MHz$		180			180		pF
Temperature coefficient of V_{oc}	α_t			- 2.2			- 2.2		mV/°C
Temperature coefficient of I_{sc}	β_t			0.18			0.18		%/°C
Spectral sensitivity	λ		450 ~ 1,050			700 ~ 1,050			nm
Peak wavelength	λ_p		900			940			nm
Half angle	$\Delta \theta$		±60			±60			deg.

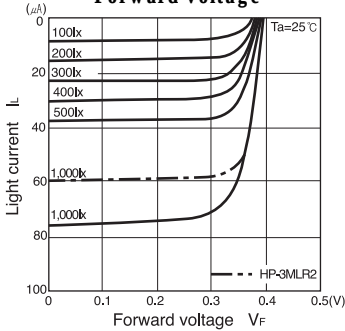
*2. Color temp. = 2856K standard Tungsten lamp



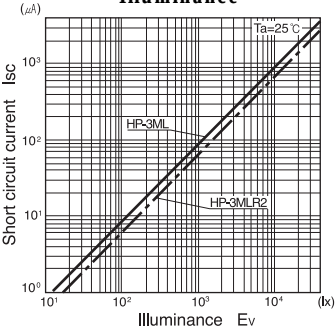
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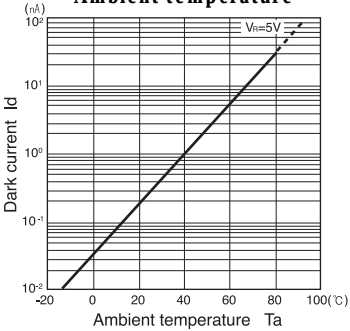
Light current Vs.
Forward voltage



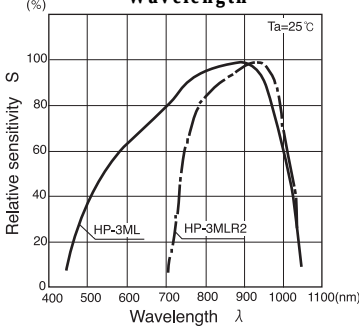
Short circuit current Vs.
Illuminance



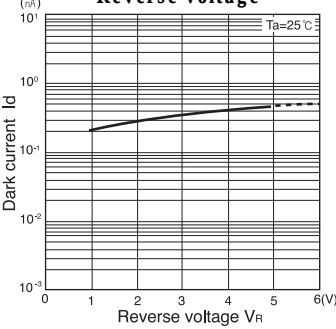
Dark current Vs.
Ambient temperature



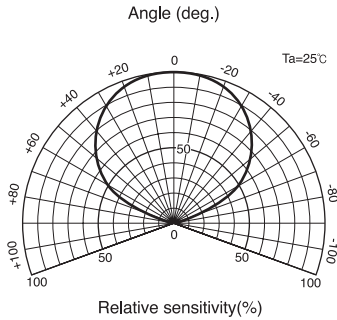
Relative sensitivity Vs.
Wavelength



Dark current Vs.
Reverse voltage



Radiant Pattern



Capacitance between terminals Vs.
Reverse voltage

