

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

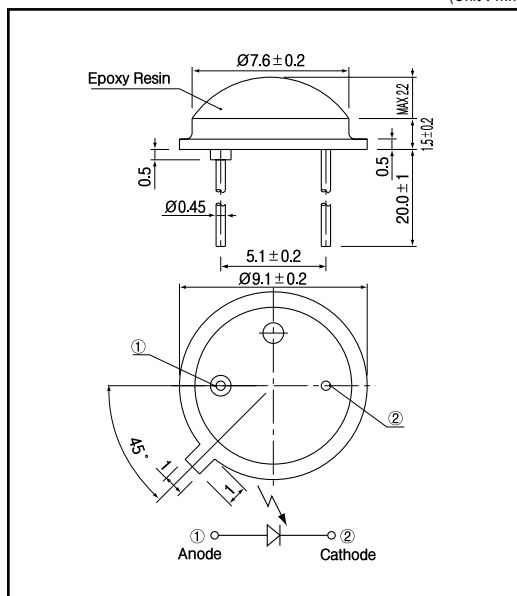
- High - output power
- High - speed response
- Wide angular response
- Relatively low - cost against metal can package

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)

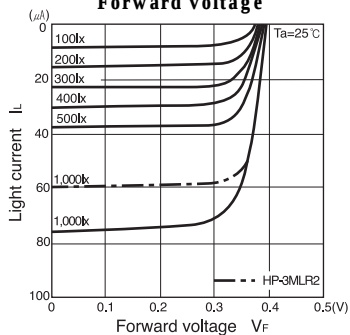
Item	Symbol	Conditions	HP - 3ML			HP - 3MLR2			Unit.
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Open circuit voltage	V_{oc}	$E_v = 1,000 \text{ lx}^{-2}$		0.38		0.30			V
Short circuit current	I_{sc}		54	75		60			μA
Dark current	I_d	$V_R = 5V$			1			10	μA
Curve factor	C.F.		0.55			0.55			-
Capacitance	C_t	$V = 0V, f = 1\text{MHz}$		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

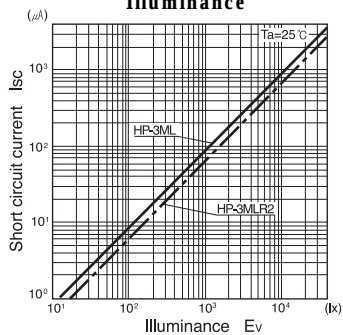
Photo diodes

HP - 3ML · HP - 3MLR2

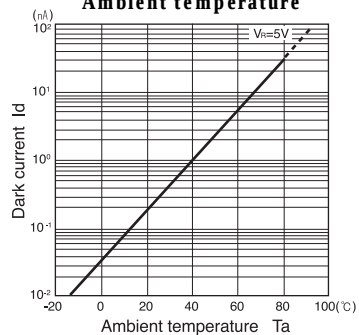
**Light current Vs.
Forward voltage**



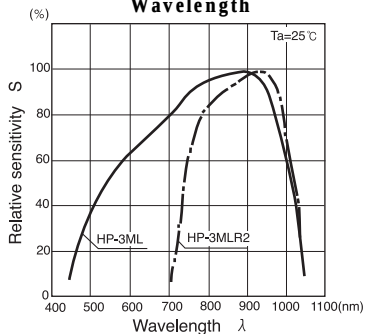
**Short circuit current Vs.
Illuminance**



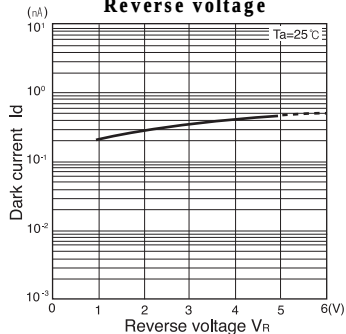
**Dark current Vs.
Ambient temperature**



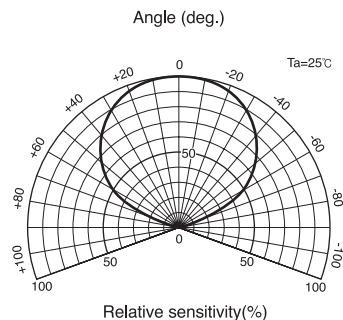
**Relative sensitivity Vs.
Wavelength**



**Dark current Vs.
Reverse voltage**



Radiant Pattern



**Capacitance between terminals Vs.
Reverse voltage**

