

ST - 1MLAR2 · ST - 1MLBR2

The ST - 1MLAR2 and 1MLBR2 are high - sensitivity NPN silicon phototransistors mounted in a TO - 18 Type header with black epoxy encapsulation. With daylight filter the phototransistor is sensitive only to infrared rays.

FEATURES

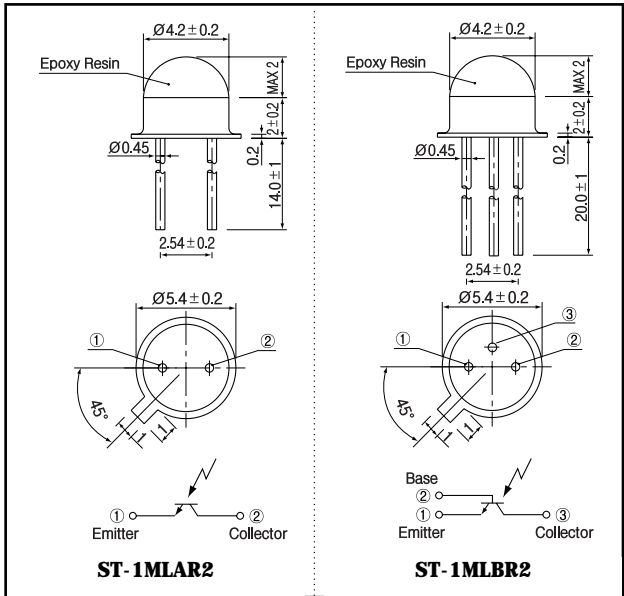
- Wide angular response
- Relatively low - cost against metal can package
- Low profile package
- With daylight filter

APPLICATIONS

- Remote control sensors
- Card readers
- Optical switches

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
C - E voltage	V _{CE0}	40	V
E - C voltage	V _{EC0}	4	V
Collector current	I _c	30	mA
Collector power dissipation	P _c	100	mW
Operating temp.	T _{opr.}	- 25 ~ +90	
Storage Temp.	T _{stg.}	- 30 ~ +100	
Soldering temp. *1	T _{sol.}	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

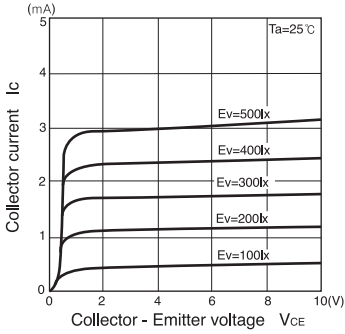
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I _{CE0}	V _{CE0} =10V		1	200	nA
Light current	I _L	V _{CE} =10V, 200lx ⁻²	0.5	1.2	5.0	mA
C - E saturation voltage	V _{CE(sat)}	I _c =2mA, 2,000lx ⁻²		0.2	0.4	V
Switching speeds	Rise time	V _{CC} =10V, I _c =5mA, R _L =100		8		µsec.
	Fall time			10		µsec.
Spectral sensitivity				720 - 1,050		nm
Peak wavelength	p			940		nm
Half angle				± 70		deg.

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

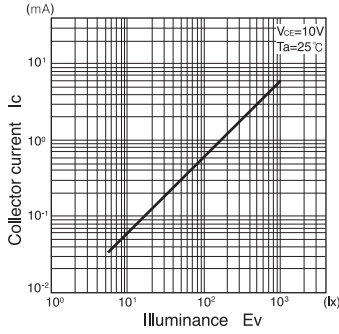
Photo transistors

ST - 1 MLAR2 · ST - 1 MLBR2

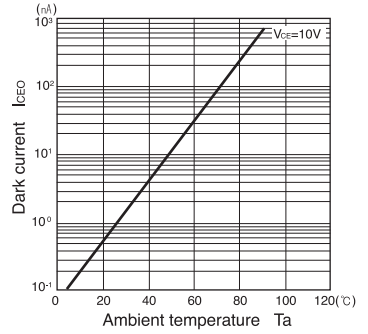
Collector current Vs. Collector - Emitter voltage



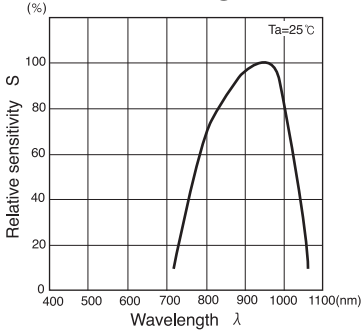
Collector current Vs. Illuminance



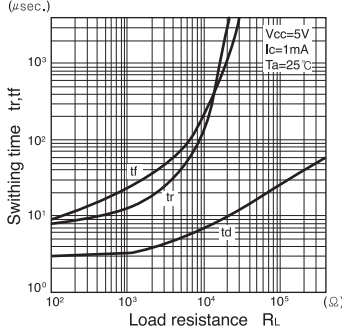
Dark current Vs. Ambient temperature



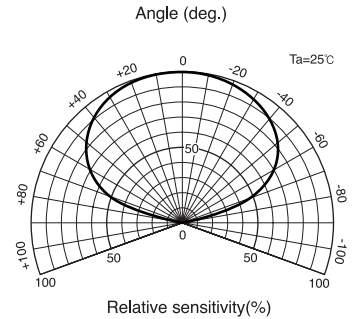
Relative sensitivity Vs. Wavelength



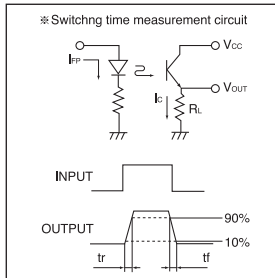
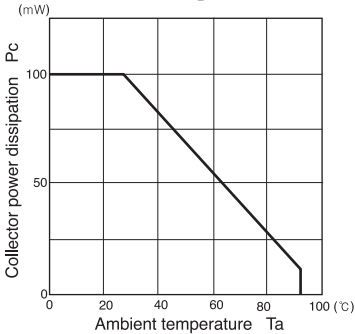
Switching time vs. Load resistance



Radiant Pattern



Collector power dissipation Vs. Ambient temperature



This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.