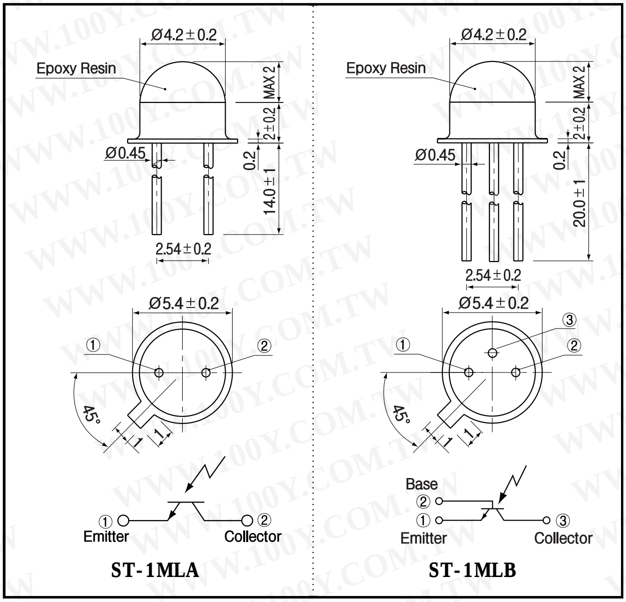
ST - 1MLA · ST - 1MLB

The ST - 1MLA and 1MLB are high - sensitivity NPN silicon phototransistors mounted in TO - 18 Type header with clear epoxy encapsulation. The phototransistors have a wide angular response and relatively low - cost compared to TO - 18 can type devices.

DIMENSIONS

(Unit : mm)



FEATURES

- Wide angular response
- Relatively low - cost against metal can package
- Low profile package
- Two leads (Collector, Emitter) ST - 1MLA
- Three leads (Collector, Emitter, Base) ST - 1MLB

APPLICATIONS

- Optical counters
- Infrared sensors
- Camera stroboscopes

MAXIMUM RATINGS

(Ta=25℃)

Item	Symbol	Rating	Unit
C - E voltage	V_{CEO}	40	V
E - C voltage	V_{ECO}	4	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	100	mW
Operating temp.	Topr.	- 25 ~ + 90	℃
Storage Temp.	Tstg.	- 30 ~ + 100	℃
Soldering temp. *1	Tsol.	260	℃

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25℃)

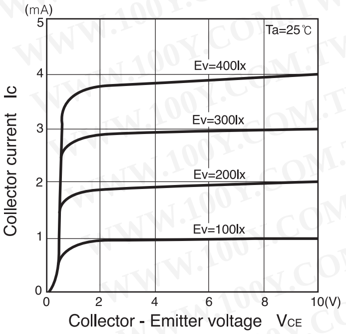
Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current		I_{CEO}	V_{CEO}=10V		1	200	nA
Light current		I_L	V_{CE}=10V, 200lx *2	0.5	2.0	5.0	mA
C - E saturation voltage		V_{CE}(sat)	I_C=2mA, 2,000lx *2		0.2	0.4	V
Switching speeds	Rise time	tr	V_{CC}=10V, I_C=5mA, R_L=100Ω		8		μsec.
	Fall time	tf			10		μsec.
Spectral sensitivity		λ			500~1,050		nm
Peak wavelength		λp			880		nm
Half anglee		△θ			±70		deg.

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

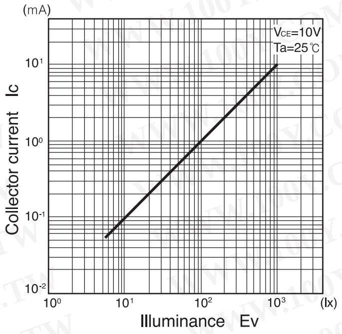
Photo transistors

ST - 1MLA· ST - 1MLB

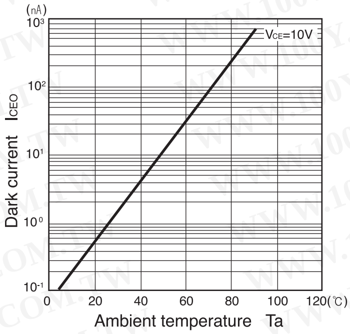
Collector current Vs. Collector - Emitter voltage



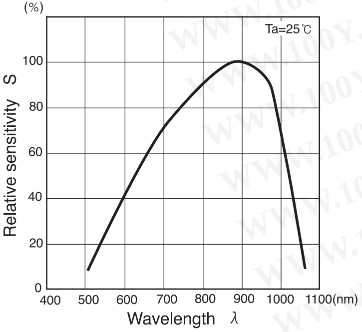
Collector current Vs. Illuminance



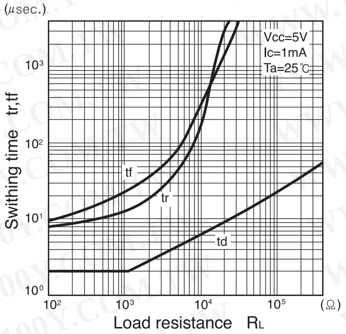
Dark current Vs. Ambient temperature



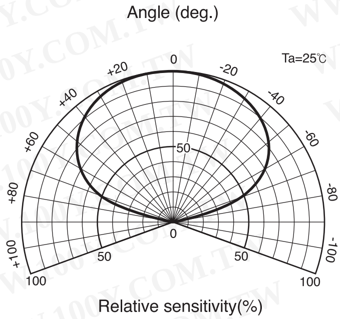
Relative sensitivity Vs. Wavelength



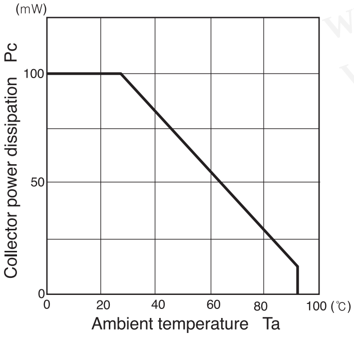
Swithing time vs. Load resistance

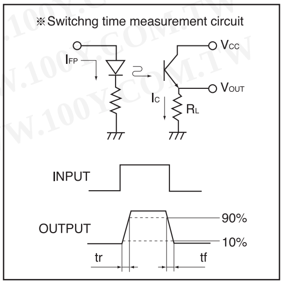


Radiant Pattern



Collector power dissipation Vs. Ambient temperature




※Switchng time measurement circuit