

PT - 304R2L

The PT - 304R2, a high - output NPN silicon photodarlington mounted in a clear sidelooking package, is compact, low profile and easy to mount.

FEATURES

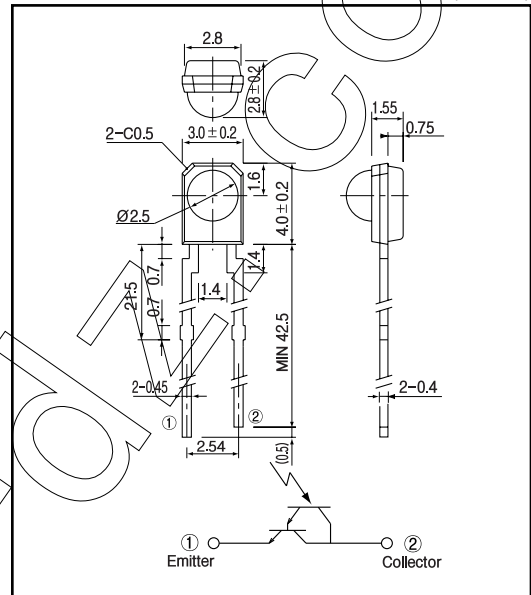
- Low profile package
- Compact
- Low - cost
- Side looking plastic package

APPLICATIONS

- Optical counters
- Optical detectors
- Tape - end sensors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
C - E voltage	V_{CEO}	30	V
E - C voltage	V_{ECO}	4	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	75	mW
Operating temp.	$T_{opr.}$	- 25 ~ + 85	
Storage Temp.	$T_{stg.}$	- 30 ~ + 85	
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)

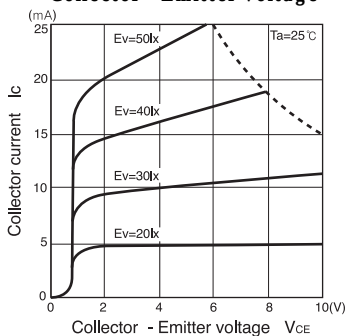
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Collector dark current	I_{CEO}	$V_{CEO} = 10V$			10	μA
Light current	I_L	$V_{CE} = 5V, 200lx^2$	5			mA
C - E saturation voltage	$V_{CE(sat)}$	$I_C = 1mA, 1,000lx^2$			1.4	V
Switching speeds	Rise time	$V_{CC} = 10V$ $I_C = 5mA$		65		μsec.
	Fall time			75		μsec.
Spectral sensitivity	λ	$R_L = 100\Omega$		700 ~ 1,000		nm
Peak wavelength	λ_p			850		nm
Half angle	θ			± 40		deg.

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

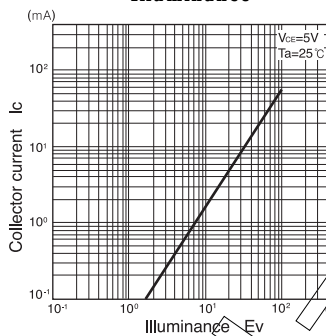
Photo darlingtontons

PT - 304R2L

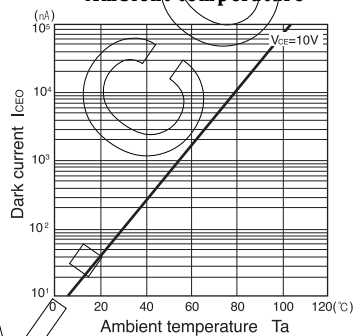
**Collector current Vs.
Collector - Emitter voltage**



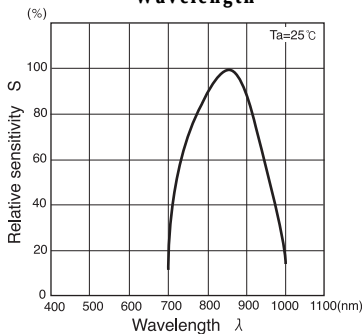
**Collector current Vs.
Illuminance**



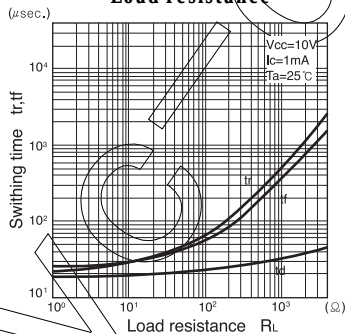
**Dark current Vs.
Ambient temperature**



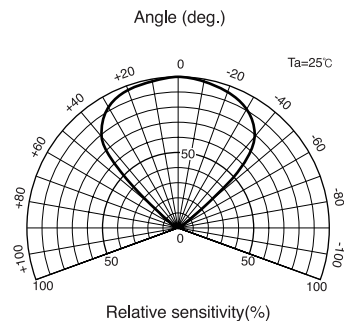
**Relative sensitivity Vs.
Wavelength**



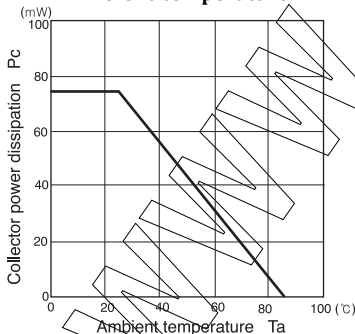
**Switching time Vs.
Load resistance**



Radiant Pattern



**Collector power dissipation Vs.
Ambient temperature**



*** Switching time measurement circuit**

