**Features**

- Fast response time
- High sensitivity
- Thin and small package
- Pb free
- This product itself will remain within RoHS compliant version

Description

- The ST203 consists of an infrared emitting diode and a silicon phototransistor encased in a black thermo-plastic housing.
- The advantage of the device is the small package.
- Phototransistor receives radiation from the IR LED only, and avoids the noise from ambient light.

Applications

- Camera
- Copier
- Scanner
- Non-contact Switching



Device Selection Guide

Device No.	Chip Material
IR1918C	GaAIAs
PT1918B	Silicon

Absolute Maximum Ratings (Ta=25)

Parameter		Symbol	Ratings	Units
Input	Power Dissipation at (or below) 25 Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Continuous Forward Current	I _F	50	mA
Output	Power Dissipation at (or below) 25 Free Air Temperature	Pd	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Voltage	BV _{CEO}	30	V
	Emitter-Collector Voltage	BV _{ECO}	5	V
Operating Temperature		Topr	-25~+80	
Storage Temperature		Tstg	-40~+85	
Lead Soldering Temperature *1		Tsol	260	

Notes: *1. Soldering time 5 seconds. (1/16 inch from body)

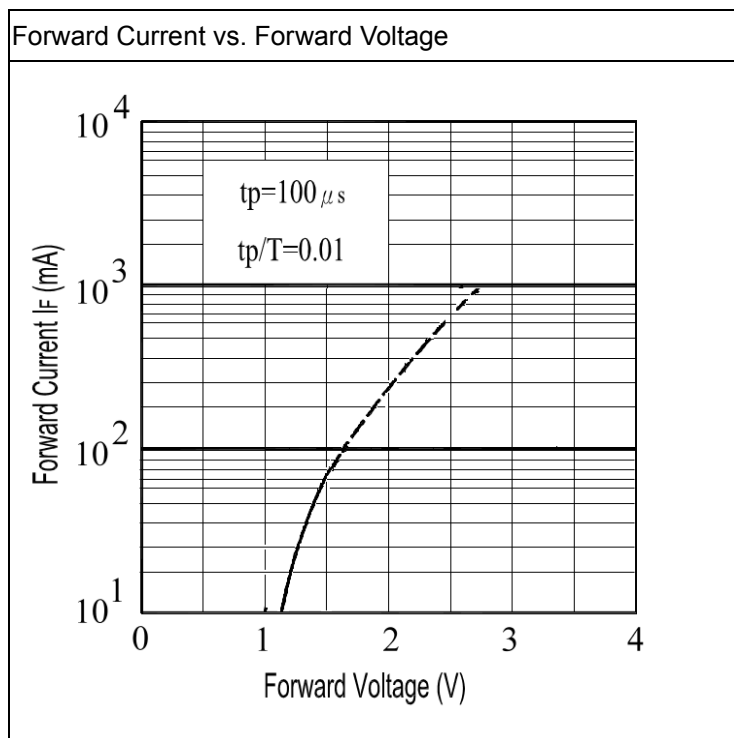
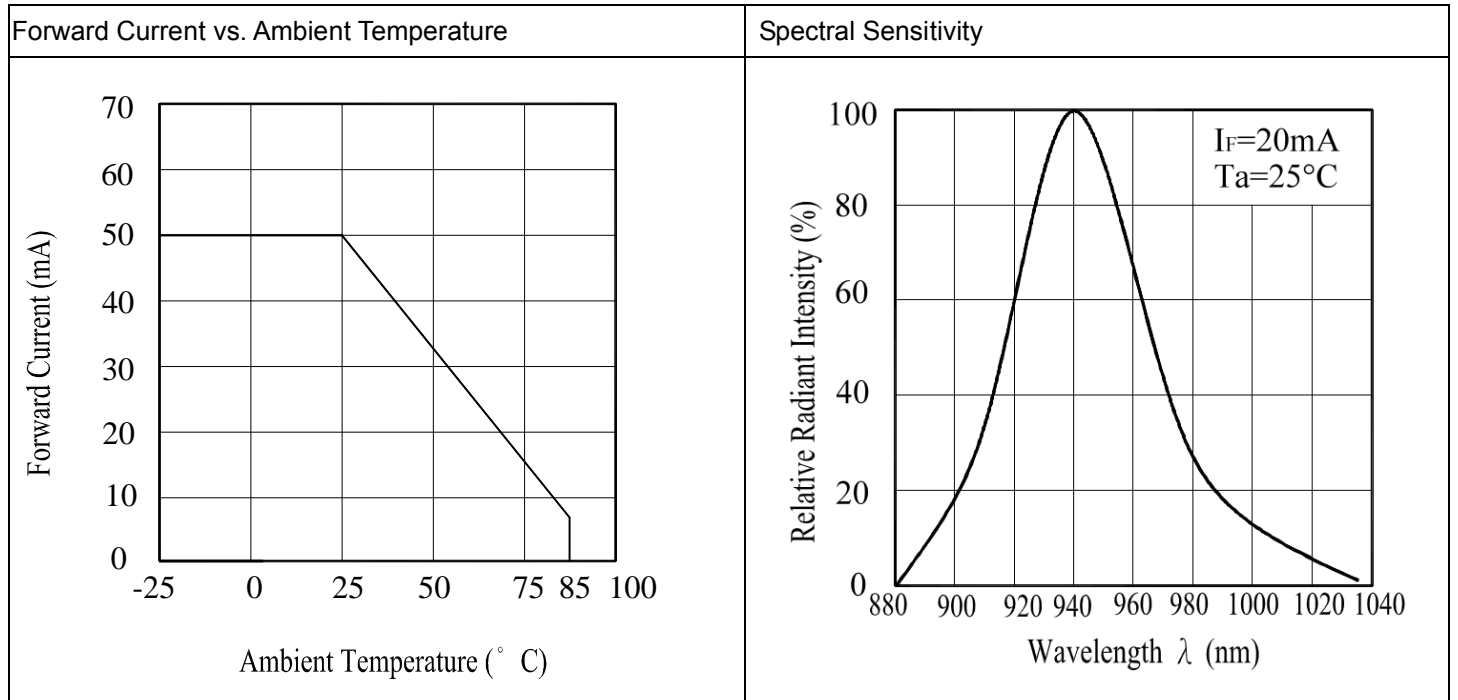


Electro-Optical Characteristics (Ta=25)

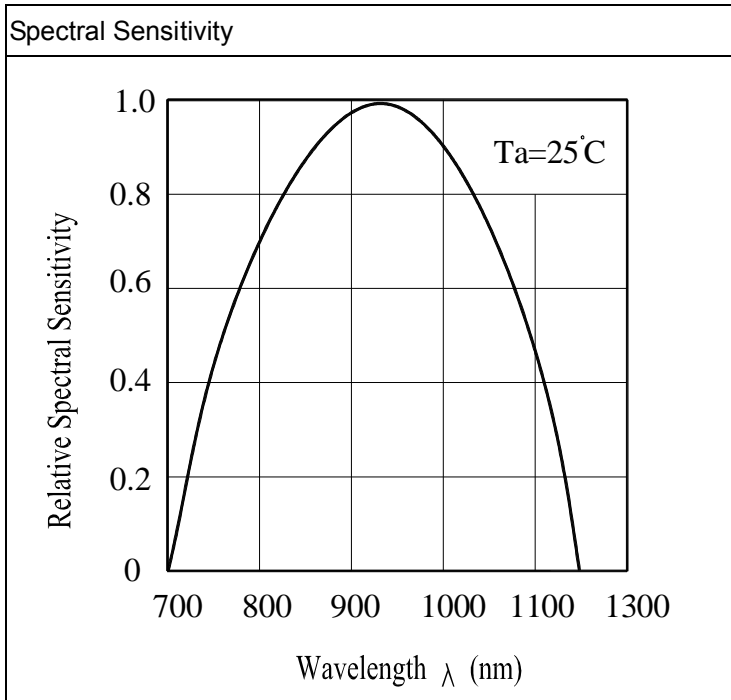
Parameter		Conditions	Symbol	Min.	Typ.	Max.	Unit
Input	Forward Voltage	$I_F=20\text{mA}$	V_F	---	1.23	1.6	V
	Reverse Current	$V_R=5\text{V}$	I_R	---	---	10	μA
	Peak Wavelength	$I_F=20\text{mA}$	λ_P	---	940	---	nm
Output	Collector Dark Current	$V_{CE}=20\text{V}$ $E_e=0\text{mW/cm}^2$	I_{CEO}	---	---	100	nA
	Collector-Emitter Saturation Voltage	$I_C=2\text{mA}$ $E_e=1\text{mW/cm}^2$	$V_{CE(sat)}$	---	---	0.4	V
Transfer Characteristics	On State Collector Current	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$	$I_{C(on)}$	0.2	---	5.0	mA
	Leakage Current	$V_{CE}=5\text{V}$ $I_F=20\text{mA}$	I_{CEOD}	---	---	1	μA



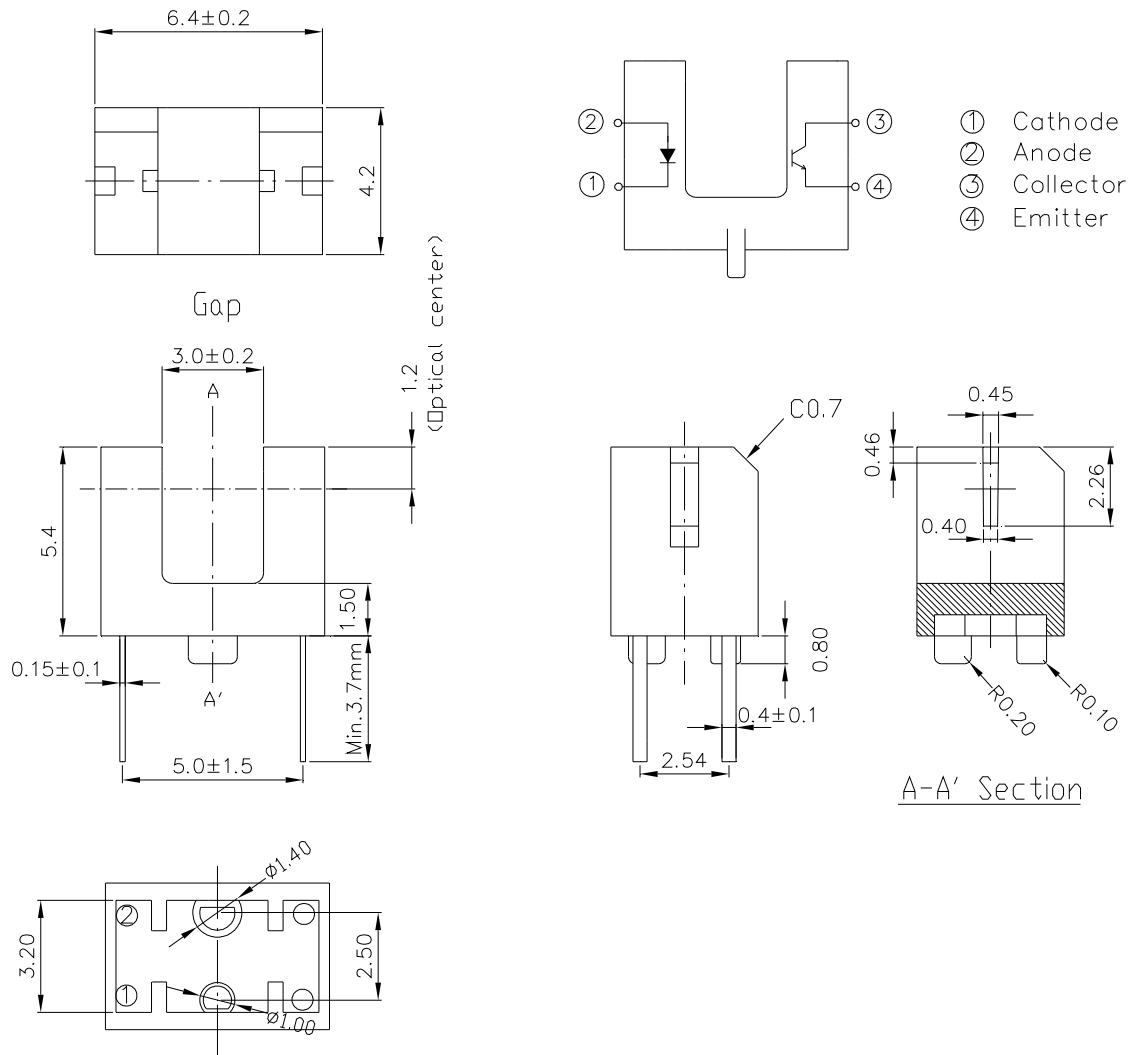
Typical Electrical/Optical/Characteristics Curves for IR



Typical Electrical/Optical/Characteristics Curves for PT



Package Dimension



- Notes: 1. All dimensions are in millimeters
 2. Tolerances unless dimensions $\pm 0.2\text{mm}$