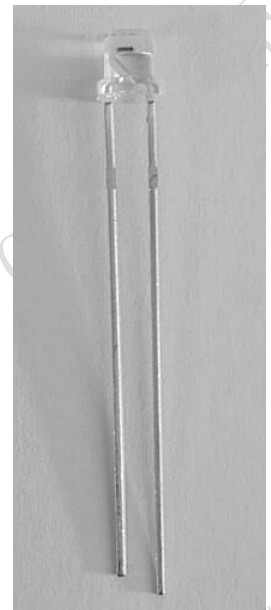


## Ambient Light Sensor

### Description

GT443PT-A2 ambient light sensor plays a key role in power savings strategies by controlling LCD display intensity and keypad backlighting of mobile devices and in commercial on/off-lighting operation.

It is sensitive to visible light much like the human eye and has Peak sensitivity at 520 nm, Is photo -IC daylight sensor with Optical filterless . it has both low drive voltage and output in Proportion to illumination, and it has not sensitivity in a long Wavelength domain.



### Features

- High sensitivity,  $I_{PCE} = 280 \mu A$  ( $E_V = 100 \text{ lx}$ )
- Adapted to human eye responsivity
- Lead (Pb)-free component in accordance with RoHS

### Applications

Ambient light sensor for control of display backlight dimming in LCD displays and keypad backlighting of mobile devices and in commercial on/off-lighting operation.

- Notebook computers
- PDA's
- Cameras

**Absolute Maximum Ratings**

(Ta=25°C)

Ltem	Symbol	Ratings	Unit	Remarks
Supply voltage	Vcc	-0.5~10	v	-
Operating temp*1	Topr	-20~+85	°C	-
Storage temp	Tstg	-30~+100	°C	-
Soldering temp	Tsol	260	°C	-

**Note:\*1.Vcc=5V,RL=100Ω****Recommendable operating voltage**

(Ta=25°C)

Ltem	Symbol	Ratings	Unit	Remarks
Supply voltage	Vcc	1.8-6.0	v	-

**Electro-optical characteristics**

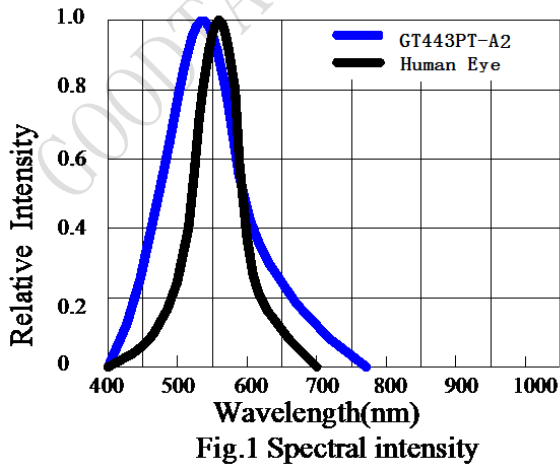
(VCC=5V、A light source、Ta=25°C)

Ltem	Symbol	condition	Min	Typ	Max	Unit
Dark current	I <sub>d</sub>	E = 0 lx, Vce=5.0v			200	nA
Light current	I <sub>L</sub>	Ev = 100 lx, A, ※1	150	230	280	μA
Light current	I <sub>L</sub>	Ev = 1.5 lx, A, ※1	2.5	4.0	5.5	μA
Peak wavelength	λ <sub>p</sub>			520		nm
Spectral sensitivity	λ		400		750	nm
Half angle	Δθ			±65°		deg

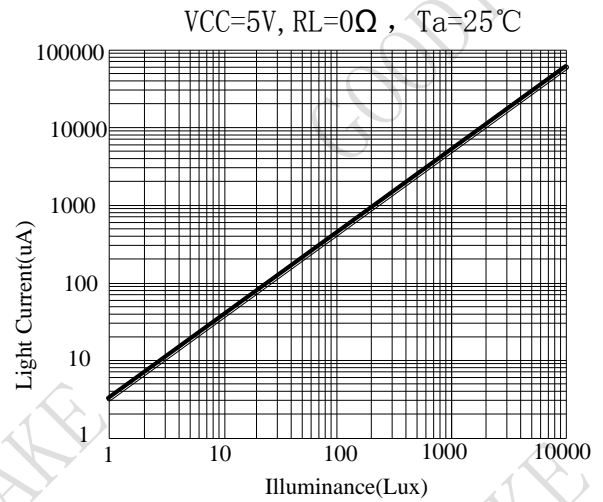
※ 1 The inspection process shall substitute for LED( 2856k)

**Typical Characteristics**

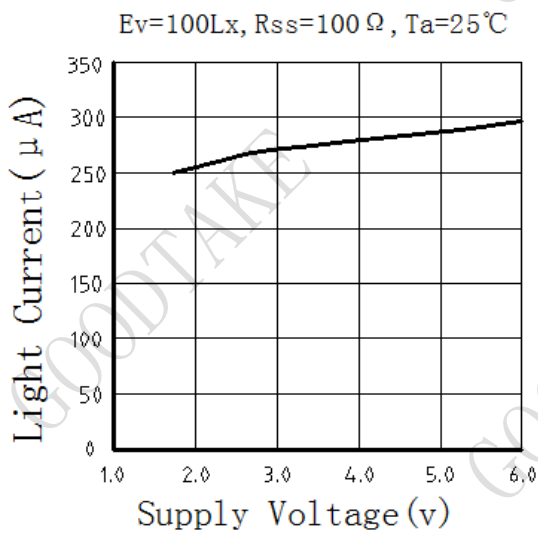
**Spectrum sensitivity**



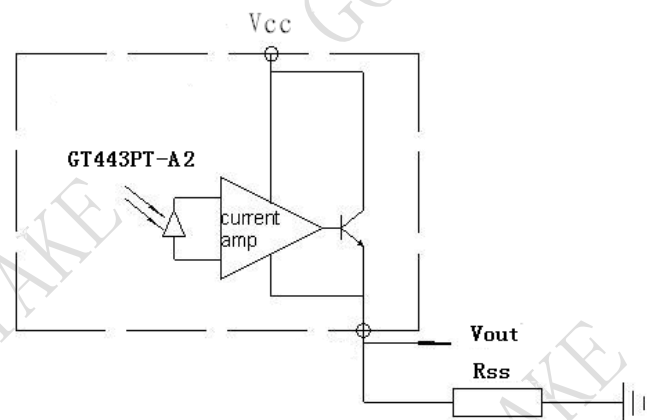
**Light current & illuminance**



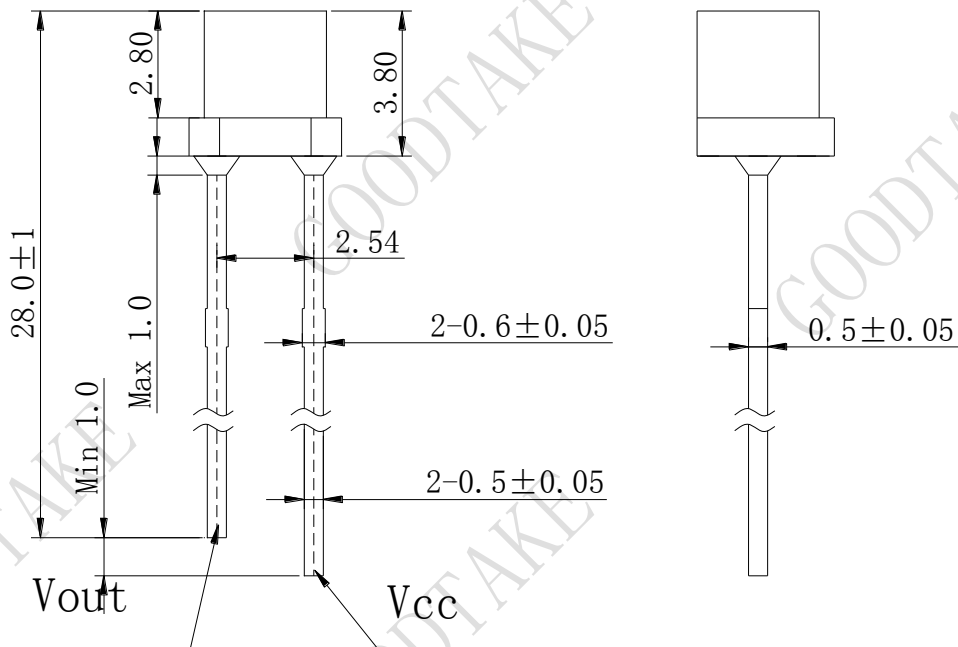
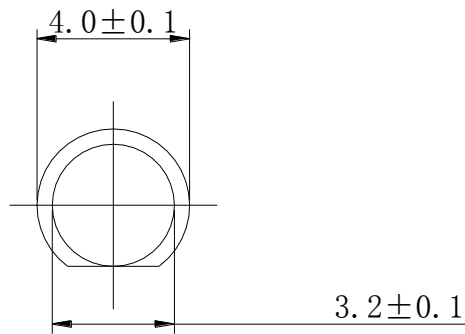
**Light current & supply voltage**



**Application circuit**



Package Outline



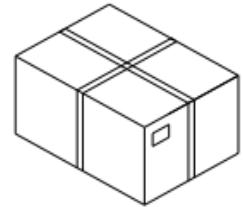
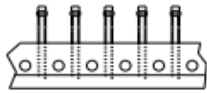
Unit : mm

NOTE: 1. All dimensions are in millimeter, tolerance is  $\pm 0.2$  unless otherwise noted.

**Packing**

**Ammo pack radial taped**

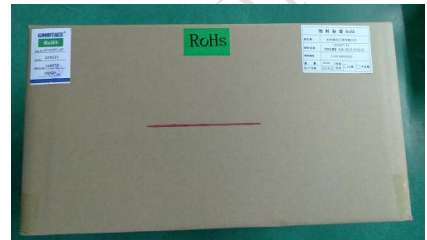
1. Fixed quantity(3000pcs) of the products are packed into inner packing plastic bags;
2. The inner packing plastic bags into inner box and sealed with a plastic bag;
3. Ten inner boxes are put into #box(max30.000pcs), Packing slit is pasted on the out box



Inner packing plastic bags

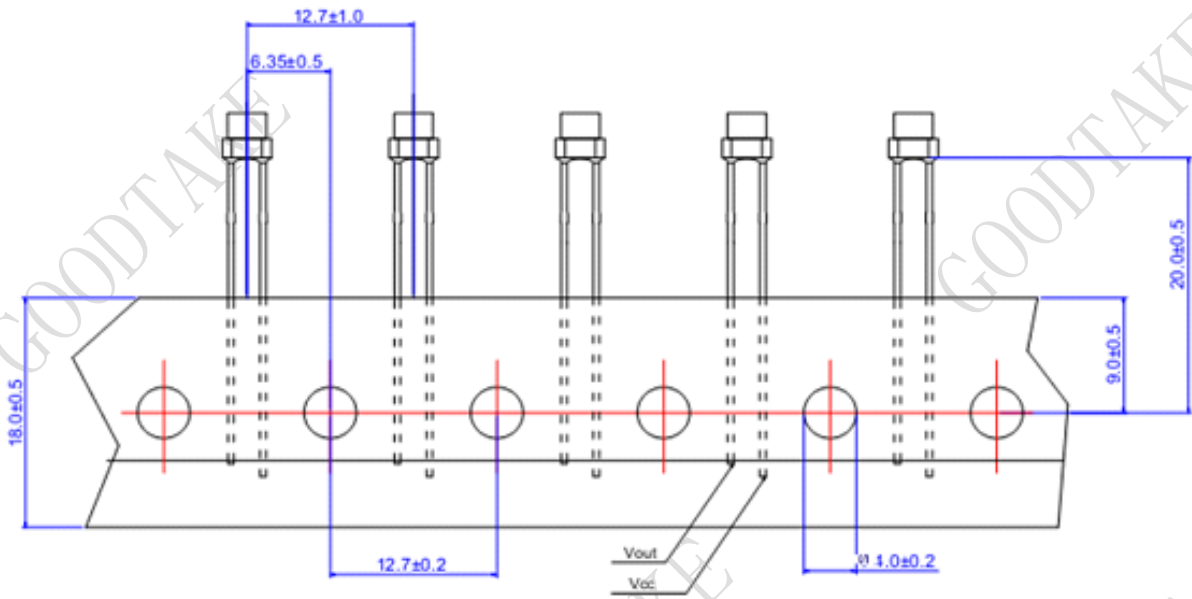


into inner box and sealed with a plastic bag



out box

**Taping Specification**



单位: mm

**Shelf life**

Devices should be stored in its original packing, in a controlled environment of temperature less than  $40^{\circ} \text{C}$  and relative humidity below 90%. Suggested shelf life is 6 months in its original packing.

**Floor life**

Time between soldering and removing from moisture barrier bags must not exceed the time indicated in J-STD-020.

Moisture sensitivity: level 3

Floor life: 168h

Conditions:  $T_{amb} < 30^{\circ} \text{C}$ ,  $RH < 60\%$