

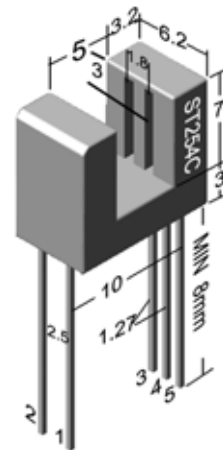
## ST254C

### ● Features

- Combines high output GaAs IRED with high sensitive twin phototransistor.
  - The phototransistors' centre distance is 1.8mm. any moving object's direction over 2mm width can be detected.
  - Non-contact detecting manner.
- ### ● Applications
- IC card electric power meter.
  - AMR system.
  - CCTV pan/tilt control and stage lighting control.
  - Combined with direction detector IC(st288A), it can be used as detecting moving direction, rotating speed and moving distance etc.

### ● Dimensions Unit:mm

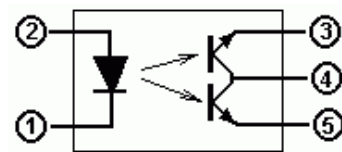
Unless otherwise specified, the tolerances are  $\pm 0.2\text{mm}$



### ● Absolute Maximum Ratings(Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward Current	IF	50	mV
	Reverse Voltage	VR	6	V
	Power Dissipation	P	75	mW
Output	Collector-Emitter voltage	VCEO	25	V
	Emitter-Collector voltage	VECO	6	V
	Collector Power Dissipation	PC	50	mW
*Operating Temperature		Topr	-20~65	°C
Storage Temperature		Tstg	-30~75	°C
** Soldering Temperature		Tsol	260	°C

Internal Circuit



\*The special requirement could be met according to customer's request.

\*\*Soldering time: 5s max. soldering position: at least 1.5mm from the base of the package.

### ● Electro-Optical Characteristics(Ta=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	VF	IF=20mA	-	1.25	1.5	V
	Reverse Current	IR	VR=3V	-	-	10	$\mu\text{A}$
Output	Collector Dark Current	ICEO1	VCE=20V	-	-	1	$\mu\text{A}$
		ICEO2					
	Collector Light Current	IL1	VCE=5V	0.2	-	-	mA
		IL2	IF=8mA				
Collector-Emitter Saturation Voltage	VCE(SAT)	IF=8mA IC=0.15mA	-	-	0.4	V	
	VCE(SAT)						
Transfer Characteristics	Response Time	Rise Time	IF=20mA VCE=5V	-	5	-	$\mu\text{S}$
		Fall Time	RC=100 $\Omega$	-	5	-	$\mu\text{S}$