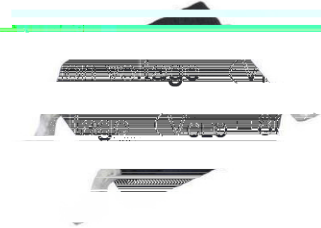


1. Features

- Current transfer ratio(CTR : MIN. 50% at $I_E = 50\mu A, V_{CE} = 5V, T_A = 25^\circ C$)

- ⊕ High input -output isolation voltage ($V_{iso}=3.750V_{rms}$)

$$(I_C / I_E) \geq 8(0)$$



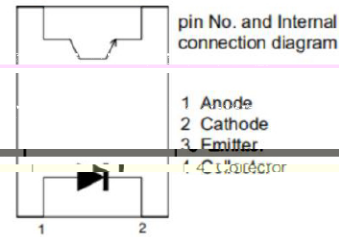
- ⊕ In compliance with RoHS, REACH standards

- ⊕ MSL Class I

2. Instructions

- ▶ The OR-357 series device consists of an infrared led, photo transistor detector. They are encapsulated in a 4 pin SOP encapsulation.

3mm



▶ This device is suitable for applications that require high density mounting. It is suitable for use in system appliances, measuring instruments.

a. Max Ratings

Symbol	Parameter	Unit	Value
T_J	Junction Temperature	°C	125
V_{R}	Reverse Voltage	V	Reverse Voltage
P_C	Consumed Power	mW	70
V_{CEO}	Collector and emitter Voltage	V	80
V_{ECO}	Emitter and collector Voltage	V	70
I_E	Emitter Current	mA	50
P_C	Consumed Power	mW	100
P_{tot}	Total Consume Power	mW	200
V_{iso}	*1 Insulation Voltage	Vrms	3750
T_{opr}	Working Temperature	°C	-55 to + 110
T_{stg}	Deposit Temperature	°C	-55 to + 125
T_{sol}	*2 Soldering Temperature	°C	260



- *1. AC Test, 1 minute, humidity = 40~60%
Insulation test method as below:
(1) Short circuit both terminals of photo coupler.
(2) No Current when testing insulation voltage.
(3) Adding sine wave voltage when testing.
- *2. soldering time is 10 seconds.

5. Opto-electronic Characteristics

	Parameter	Symbol	Min	Typ.*	Max	Unit	Condition
Input	Forward Voltage	V_F	---	1.2	1.4	V	$I_F=20mA$
	Reverse Current	I_R	---	---	5	μA	$V_R=5V$
	Input Capacitance	C_i	---	30	250	pF	$V=0, f=1KHz$
Output	Collector Current	I_C	---	---	30	mA	$V_{CE}=5V, I_F=20mA$
	Collector and Emitter Saturation Voltage	BV_{CEO}	80	---	---	V	$I_C=0.1mA, I_F=0mA$
	Collector-Emitter Voltage	V_{CE}	---	---	---	V	$I_E=0.1mA, I_F=0mA$
	Current Conversion Ratio	β	30	---	300	%	$I_F=5mA, V_{CE}=5V$
	Collector Current	I_C	2.5	---	30	mA	
Characteristics	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	---	---	0.2	V	$I_F=20mA, I_C=1mA$
	Insulation Impedance	R_{iso}	5×10^{10}	1×10^{11}	---	Ω	DC500V 40~60%R.H.
	Fluctuation Capacitance	C_f	---	0.6	1	pF	$V=0, f=1MHz$
	Turn-on Time	t_{on}	---	---	10	μs	$V_{CC}=2V, I_C=2mA$
	Turn-off Time	t_{off}	---	---	10	μs	$R_L=100\Omega$

* Current Conversion Ratio = $I_C / I_F \times 100\%$

