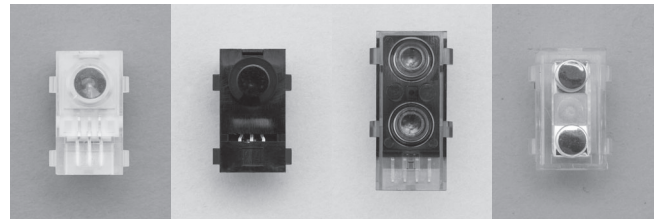


• **Transmissive photointerrupters (object detection sensors)**

Photointerrupter for object detection with light emitting and receiving elements built into the case. Unlike other companies, the integrated structure of the element and connector drastically minimizes sensitivity variations due to optical axis misalignment.



Separate Light Emission Diode    Separate Photo Detector    Integral device (Receiving/ Emission)    Prism

**Applications**

- Bill detection for cash machine
- Printing/ Photocopy machine, Paper passage detection
- Object passage detection

• **Separate Light Emission Diode**

• Absolute Maximum Ratings

Ta=25°C

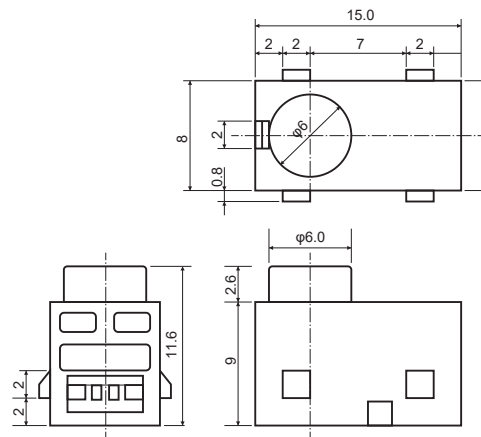
Item	Symbol	Rating	Unit
Forward Current	IF	60	mA
Pulse Forward Current	IFP	0.5	A
Reverse Voltage	VR	6	V
Power Dissipation	P	120	mW
Operating Temperature	Topr	-10~+60	°C
Storage Temperature	Tstg	-10~+60	°C

• Electro-Optical Characteristics

Item	Symbol	Condition	RPU8502CP			RPU8508CP			RPU853CP			RPU857CP			RPU859CP			Unit
			min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
Forward Voltage	VF	IF=60mA	-	1.55	2.0	-	1.55	2.0	-	1.30	1.7	-	1.30	1.7	-	1.30	1.7	V
Reverse Current	IR	VR=6V	-	-	10	-	-	10	-	-	10	-	-	10	-	-	10	µA
Peak Wavelength	λp	IF=60mA	-	910	-	-	910	-	-	940	-	-	940	-	-	940	-	nm
Light Current	IP1	IF=50mA, VCE=1V L=50mm	5.5	-	28	10	-	33	2.2	-	12	4.0	-	14	4.0	-	14	mA
	IP2	IF=50mA, VCE=1V L=200mm	0.4	-	3.0	0.4	-	3.0	0.16	-	2.2	0.16	-	2.2	0.16	-	2.2	mA

• Dimensions

RPU8502/ 853/ 8600/ 8602/ 8604/ 8605CP



Unit: mm

Ta=25°C

• **Separate Photo Detector**

• Absolute Maximum Ratings

Ta=25°C

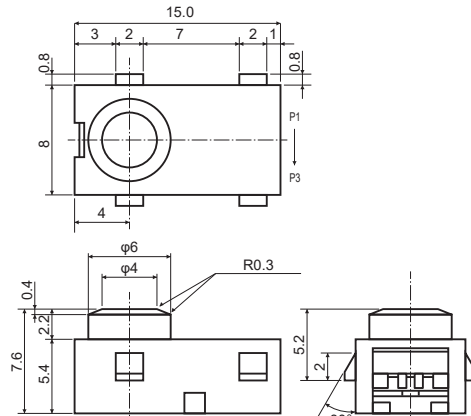
Item	Symbol	Rating	Unit
Collector-Emitter Voltage	VCEO	20	V
Emitter-Collector Voltage	VECO	5	V
Collector Current	IC	30	mA
Collector Dissipation	PC	150	mW
Operating Temperature	Topr	-10~+60	°C
Storage Temperature	Tstg	-10~+60	°C

• Electro-Optical Characteristics

Item	Symbol	Condition	RPU8600CP			RPU8602CP			RPU8604CP			RPU8605CP			RPU8608CP			Unit
			min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
Dark Current	ID	VCE=9V	-	-	100	-	-	100	-	-	100	-	-	100	-	-	100	nA
Collector-emitter Breakdown Voltage	BVCEO	IC=100µA	20	-	-	20	-	-	20	-	-	20	-	-	20	-	-	V
Light Current	IP1	IF=50mA, VCE=1V L=50mm(8604, 5CP:5mm)	3.0	-	20	5.2	-	28	1.2	-	8.4	1.2	-	8.4	5.2	-	28	mA
	IP2	IF=50mA, VCE=1V L=200nm	0.1	-	1.5	0.4	-	5.0	-	-	-	-	-	-	0.4	-	5.0	mA

• Dimensions

RPU857CP



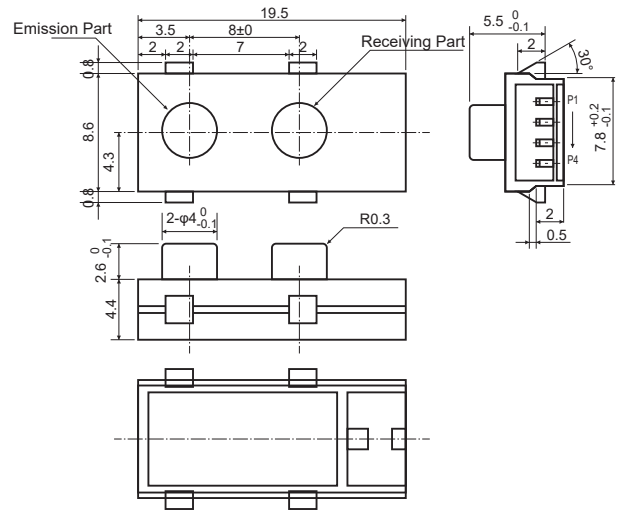
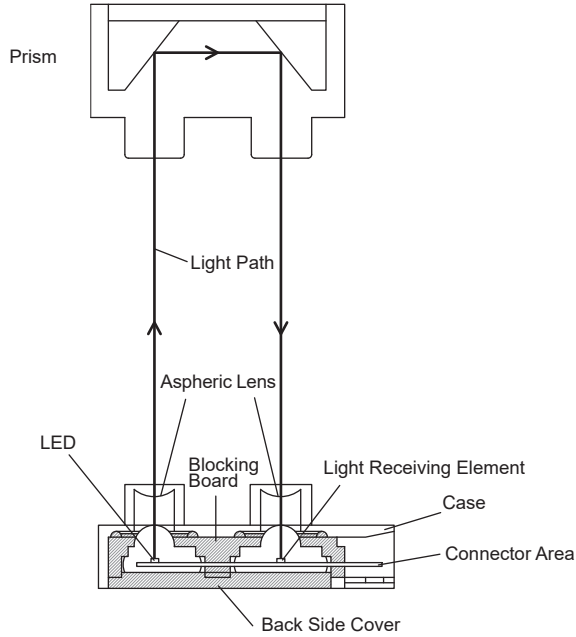
Unit: mm

Ta=25°C

● Integral Device (Receiving/ Emission)

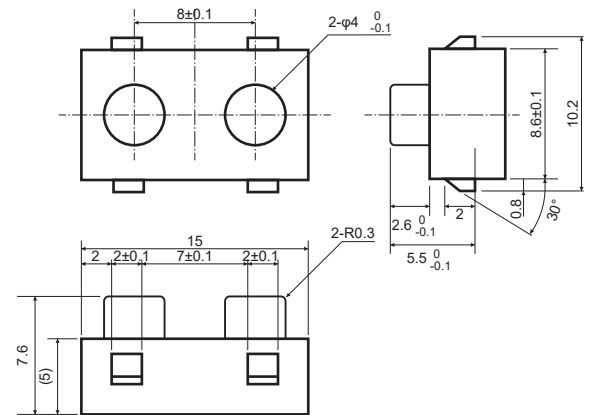
● Dimensions RPU8702/ 875CP

● Product Specification Outline



- Note:
1. No bent pin headers on connectors.
  2. The applied load to the stopper section must be less than 2kg/cm<sup>2</sup>.
  3. Dimensional tolerances without entry  
Less than 1mm ±0.05  
More than 1mm ±0.1

RPU872PR2



- Note: Dimensional tolerances without entry  
Less than 10mm ±0.1  
More than 10mm ±0.2

Unit: mm

● Absolute Maximum Ratings

Ta=25°C

Item		Symbol	Rating	Unit
Emitter	Forward Current	IF	60	mA
	Pulse Forward Current	IFP	0.5	A
	Reverse Voltage	VR	6	V
	Power Dissipation	P	120	mW
Detector	Collector-Emitter Voltage	VCEO	20	V
	Emitter-Collector Voltage	VECO	5	V
	Collector Current	IC	30	mA
	Collector Dissipation	PC	150	mW
Operating Temperature		ToPr	-10~+60	°C
Storage Temperature		Tstg	-10~+60	°C

● Electro-Optical Characteristics

Ta=25°C

Item	Symbol	Condition	RPU8702CP			RPU875CP			Unit
			min.	typ.	max.	min.	typ.	max.	
Emitter	Forward Voltage	VF	1.0	1.55	2.0	1.0	1.5	2.0	V
	Reverse Current	IR	-	-	10	-	-	10	µA
Detector	Peak Wavelength	λp	-	910	-	-	940	-	nm
	Dark Current	ID	-	-	100	-	-	100	nA
	Collector-emitter Breakdown Voltage	BVCEO	20	-	-	20	-	-	V
	Leak Current	I <sub>LEAK</sub>	-	-	100	-	-	100	µA
Coupled	Light Current	IP	2.0	-	10	0.8	-	-	mA
	Collector-Emitter Saturation Voltage	VCE(sat)	0.1	-	0.35	0.1	-	0.35	V
	Signal-to-noise Ratio	-	30	-	-	30	-	-	-