







## ■ Photocoupler Lineup

### <Phototransistor output type>

Package type	Output type	Features	Model No. (series)	Page		
Mini-flat 4-pin Compact, SMT type 	Single phototransistor	General purpose, High collector-emitter voltage	PC357NJ0000F / PC451J00000F	13		
			Low input current	PC367NJ0000F	13	
		AC input response	PC354NJ0000F	13		
	Darlington phototransistor	High sensitivity, High collector-emitter voltage	Low input current	PC364NJ0000F	13	
			PC355NJ0000F / PC452J00000F	13		
		Low input current	PC365NJ0000F	13		
Compact, Half pitch (lead space), SMT type 	Single phototransistor	General purpose	PC3H7J00001H	14		
			Reinforced insulation	PC3HU7xYIP1B	14	
		AC input response	Low input current	PC3H71xNIP1H	14	
			PC3H3J00001H / PC3H4J00001H	14		
			PC123XxYSZ1B	15		
DIP type (4-pin) (4-pin, DIP type) 	Single phototransistor	Reinforced insulation	Low input current	PC1231xNSZ1B	15	
			General purpose, High collector-emitter voltage, etc.	PC817XxNSZ1B / PC851XNNSZ1H	15	
		Darlington phototransistor	High sensitivity, High collector-emitter voltage	Low input current	PC8171xNSZ1B	15
				PC852XNNSZ1H	15	

### <OPIC output type>

Package type	Output type	Features	Model No. (series)	Page
Compact, SMT type 	Digital output	General purpose, High response speed	PC400J00000F	16
	Analog/Digital output	High CMR	PC457LONIP0F	16



## ■ Photocouplers

### ◆ Phototransistor Output Type

#### <Compact, SMT type>

○: Approved

(Ta = 25°C)

Output type	Model No.	Internal connection diagram	Features	Approved by safety standards <sup>*2</sup>	Package	Absolute maximum ratings			Electro-optical characteristics						
				UL		Forward current I <sub>F</sub> (mA)	Isolation voltage (AC) V <sub>iso</sub> (rms) (kV)	Collector-emitter voltage V <sub>CEO</sub> (V)	Current transfer ratio			Response time			
									CTR (%) MIN.	I <sub>F</sub> (mA)	V <sub>CE</sub> (V)	t <sub>r</sub> (μs) TYP.	I <sub>C</sub> (mA)	R <sub>L</sub> (Ω)	V <sub>CE</sub> (V)
Single phototransistor output	PC357NJ0000F		General purpose	○	Mini-flat 4-pin	50	3.75	80	50	5	5	4	2	100	2
	PC451J00000F		High collector-emitter voltage	○		50	3.75	350	40	5	5	4	2	100	2
	PC367NJ0000F		Low input current, high resistance to noise <sup>*1</sup>	○		10	3.75	80	100	0.5	5	4	2	100	2
	PC354NJ0000F		AC input response	○		±50	3.75	80	20	±1	5	4	2	100	2
	PC364NJ0000F		Low input current, AC input response, high resistance to noise <sup>*1</sup>	○		±10	3.75	80	50	±0.5	5	4	2	100	2
Darlington photo-transistor output	PC355NJ0000F		High sensitivity	○	50	3.75	35	600	1	2	60	2	100	2	
	PC365NJ0000F		High sensitivity, low input current	○	10	3.75	35	600	0.5	2	60	10	100	2	
	PC452J00000F		High collector-emitter voltage	○	50	3.75	350	1 000	1	2	100	20	100	2	

\*1 CMR: MIN. 10 kV/μs

\*2 Please refer to Specification Sheets for model numbers approved by safety standards.



#### Notice

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### ◆Phototransistor Output Type <Compact, half pitch (lead space) SMT type>

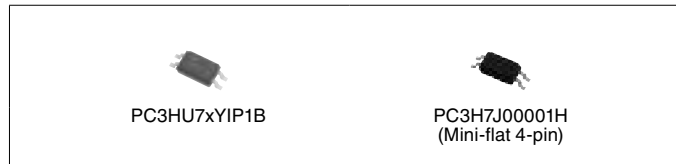
○: Approved

(Ta = 25°C)

Output type	Model No.	Internal connection diagram	Features	Approved by safety standards*2			Package	Absolute maximum ratings			Electro-optical characteristics						
				UL	VDE	Others		Forward current I <sub>F</sub> (mA)	Isolation voltage (AC) V <sub>iso</sub> (rms) (kV)	Collector-emitter voltage V <sub>CEO</sub> (V)	Current transfer ratio			Response time			
											CTR (%) MIN.	I <sub>F</sub> (mA)	V <sub>CE</sub> (V)	t <sub>r</sub> (μs) TYP.	I <sub>C</sub> (mA)	R <sub>L</sub> (Ω)	V <sub>CE</sub> (V)
Single phototransistor output	PC3HU7xYIP1B		Reinforced insulation (internal insulation distance: MIN. 0.4 mm)	○	○	○	Mini-flat 4-pin	50	3.75	80	50	5	5	4	2	100	2
	PC3H7J00001H		General-purpose	○	-	○		50	2.5	80	20	1	5	4	2	100	2
	PC3H71xNIP1H		High resistance to noise*1, low input current	○	-	○		10	2.5	80	100	0.5	5	4	2	100	2
	PC3H3J00001H		AC input response, high resistance to noise*1	○	-	-		±50	2.5	80	20	±1	5	4	2	100	2
	PC3H4J00001H		AC input response	○	-	○		±50	2.5	80	20	±1	5	4	2	100	2

\*1 CMR: MIN.10 kV/μs

\*2 Please refer to Specification Sheets for model numbers approved by safety standards.



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## ◆ Phototransistor Output Type <DIP type (4-pin)>

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(Ta = 25°C)

Output type	Model No.	Internal connection diagram	Features	Approved by safety standards <sup>5</sup>			Package	Absolute maximum ratings			Electro-optical characteristics			
				UL	VDE	Others		Forward current I <sub>F</sub> (mA)	Isolation voltage (AC) V <sub>iso</sub> (rms) (kV)	Collector-emitter voltage V <sub>CEO</sub> (V)	Current transfer ratio CTR (%) MIN.	I <sub>F</sub> (mA)	t <sub>r</sub> (μs) TYP.	R <sub>L</sub> (Ω)
Single phototransistor output	PC123XxYSZ1B <sup>*1, 3, 4</sup>		High isolation voltage, reinforced insulation	○	○	○	4-pin DIP	50	5.0	80	50	5	4	100
	PC1231xNSZ1B <sup>*1</sup>		High isolation voltage, reinforced insulation, low input current, high resistance to noise <sup>*2</sup>	○	○ <sup>*6</sup>	○		10	5.0	80	50	0.5	4	100
	PC817XxNSZ1B <sup>*3</sup>		High isolation voltage	○	-	○		50	5.0	80	50	5	4	100
	PC8171xNSZ1B <sup>*3</sup>		High isolation voltage, low input current, high resistance to noise <sup>*2</sup>	○	-	-		10	5.0	80	100	0.5	4	100
	PC851XNNSZ1H <sup>*3</sup>		High isolation voltage, high collector-emitter voltage	○	-	-		50	5.0	350	40	5	4	100
Darlington phototransistor output	PC852XNNSZ1H <sup>*3</sup>		High isolation voltage, high collector-emitter voltage	○	-	-	50	5.0	350	1 000	1	100	100	

<sup>\*1</sup> Wide lead spacing type is also available. Creepage distance: 6.4 mm or more, wide lead spacing type: 8 mm or more.

<sup>\*2</sup> CMR: 10 kV/μs MIN.

<sup>\*3</sup> Lead forming type is also available for surface mounting.

<sup>\*4</sup> Wide lead spacing type is also available. Compatible with wide lead spacing type lead-forming models for surface-mount use.

<sup>\*5</sup> Please refer to Specification Sheets for model numbers approved by safety standards.

<sup>\*6</sup> Optionally available.



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◆ **OPIC Output** (“OPIC” (Optical IC) is a trademark of SHARP Corporation. An OPIC consists of a light-detecting element and signal-processing circuit integrated onto a single chip.)

**<Compact, SMT type> (1-1)**

○: Approved

(Ta = 25°C)

Model No.	Internal connection diagram	Features	Approved by safety standards*2		Package	Absolute maximum ratings		Electro-optical characteristics*1						
			UL	VDE		Forward current IF (mA)	Isolation voltage (AC) Viso (rms) (kV)	Low level output voltage			Threshold input current			
								VOL (V) MAX.	Ta (°C)	IOI (mA)	IF (mA)	IFHL (mA) MAX.	IFLH (mA) MAX.	RL (Ω)
PC400J00000F		Digital output, normal-off operation	○	—	Mini-flat 5-pin	50	3.75	0.4	0 to +70	16	4	2.0	—	280

A: Rated voltage circuit

\*1 Each item is measured at Vcc=5V.

\*2 Please refer to Specification Sheets for model numbers approved by safety standards.

**<Compact, SMT type> (1-2)**

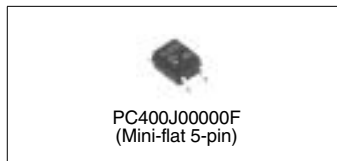
○: Approved

(Ta = 25°C)

Model No.	Internal connection diagram	Features	Approved by safety standards*1		Package	Absolute maximum ratings		Electro-optical characteristics							
			UL	VDE*2		Forward current IF (mA)	Isolation voltage (AC) Viso (rms) (kV)	Current transfer ratio			Propagation delay time				
								CTR (%) MIN.	IF (mA)	Vo (V)	Vcc (V)	tPHL (μs) TYP.	tPLH (μs) TYP.	RL (Ω)	IF (mA)
PC457L0NIP0F		High speed (1 Mb/s), high CMR (15 kV/μs), for flow soldering	○	○	Mini-flat 5-pin	25	3.75	19	16	0.4	4.5	0.2	0.4	1 900	16

\*1 Please refer to Specification Sheets for model numbers approved by safety standards.

\*2 Optionally available.



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