

### Single Channel 1 MBd Transistor Output Optocoupler (6N135/6 Type)

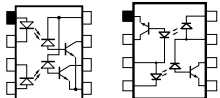
Part Number	Package			I <sub>f</sub> mA	Prop Delay μs (max.)		CTR		CMR – V/μs (V <sub>CM</sub> )			VDE V <sub>IORM</sub>		Insulation UL = 1 min.		Page No.
	300 mil DIP	SO8	400 mil DIP		t <sub>PHL</sub>	t <sub>PLH</sub>	Min. %	Max. %	1000 (10 V)	10000 (1.5 kV)	15000 (1.5 kV)	630 Vp	1414 Vp	2500 V	5000 V	
6N135 HCPL-0500 HCNW135	✓	✓	✓	16 16 16	2.0 2.0 2.0	2.0 2.0 2.0	7 7 7	50 50 150	✓ ✓ ✓					✓ ✓ ✓	B ✓ ✓	1-16
6N136 HCPL-0501 HCNW136	✓	✓	✓	16 16 16	1.0 1.0 1.0	1.0 1.0 1.0	19 19 19	50 50 150	✓ ✓ ✓				✓	✓ ✓ ✓	B ✓ ✓	
HCPL-4502 <sup>[1]</sup> HCPL-0452 <sup>[1]</sup> HCNW4502 <sup>[1]</sup>	✓	✓	✓	16 16 16	1.0 1.0 1.0	1.0 1.0 1.0	19 19 19	50 50 150	✓ ✓ ✓				✓	✓ ✓ ✓	B ✓ ✓	
HCPL-4503 <sup>[1]</sup> HCPL-0453 <sup>[1]</sup> HCNW4503 <sup>[1]</sup>	✓	✓	✓	16 16 16	1.0 1.0 1.0	1.0 1.0 1.0	19 19 19	50 50 150			✓ ✓ ✓	A ✓ ✓		✓ ✓ ✓	B ✓ ✓	
HCPL-4504 <sup>[1]</sup> <b>HCPL-0454<sup>[1]</sup></b> <b>HCNW4504<sup>[1]</sup></b>	✓	✓	✓	12 12 12	1.0 1.0 1.0	1.4 1.4 1.4	26 26 25	65 65 65		✓ ✓ ✓		A ✓ ✓		✓ ✓ ✓	B ✓ ✓	1-33
<b>HCPL-4506<sup>[2]</sup></b> <b>HCPL-0466<sup>[2]</sup></b> <b>HCNW4506<sup>[2]</sup></b>	✓	✓	✓	10 10 10	0.4 0.4 0.4	0.55 0.55 0.55	44 44 44	>90 >90 >90			✓ ✓ ✓	A ✓ ✓		✓ ✓ ✓	B ✓ ✓	1-49

**Notes:**

1. Pin 7 not connected.
2. Pin 7 connected to internal 20 K pull-up resistor.

HCPL-2530

HCPL-0560



### Dual Channel 1 MBd Transistor Output Optocoupler (6N135/6 Type)

Part Number	Package			I <sub>f</sub> mA	Prop Delay μs (max.)		CTR		CMR – V/μs (V <sub>CM</sub> )			VDE V <sub>IORM</sub>		Insulation UL = 1 min.		Page No.
	300 mil DIP	SO8	400 mil DIP		t <sub>PHL</sub>	t <sub>PLH</sub>	Min. %	Max. %	1000 (10 V)	10000 (1.5 kV)	15000 (1.5 kV)	630 Vp	1414 Vp	2500 V	5000 V	
HCPL-2530 <b>HCPL-0530</b>	✓	✓		16 16	2.0 2.0	2.0 2.0	7 7	50 50	✓ ✓					✓ ✓	B	1-63
<b>HCPL-2531</b> <b>HCPL-0531</b>	✓	✓		16 16	1.0 1.0	1.0 1.0	19 19	50 50	✓ ✓					✓ ✓	B	
HCPL-4534 <b>HCPL-0534</b>	✓	✓		16 16	1.0 1.0	1.0 1.0	19 19	50 50			✓ ✓			✓ ✓	B	
HCPL-0560* HCPL-0561*		✓ ✓		16 16	1.0 1.0	1.0 1.0	19 19	50 50	✓ ✓					✓ ✓	B	1-74

**Bold Type = New Product**

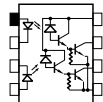
\*coming soon

A = Option 060  
B = Option 020



### Single Channel 100 Kbd High Gain Transistor Output Optocoupler (6N138/9 Type)

Part Number	Package			I <sub>f</sub> -min			CTR Min. %	VDE V <sub>IORM</sub>		Insulation UL = 1 min.		Page No.
	300 mil DIP	SO8	400 mil DIP	40 μA	0.5 mA	1.6 mA		630 Vp	1414 Vp	2500 V	5000 V	
6N138 HCPL-0700 HCNW138	✓	✓	✓			✓	300 300 300			✓ ✓ ✓	B	1-77
6N139 HCPL-0701 HCNW139	✓	✓	✓		✓ ✓ ✓		400 400 400		✓ ✓ ✓	B		
<b>HCPL-4701</b> <b>HCPL-070A</b>	✓	✓		✓ ✓			800 800	A	✓ ✓	B	1-92	



### Dual Channel 100 Kbd High Gain Transistor Output Optocoupler (6N138/9 Type)

Part Number	Package			I <sub>f</sub> -min			CTR Min. %	VDE V <sub>IORM</sub>		Insulation UL = 1 min.		Page No.
	300 mil DIP	SO8	400 mil DIP	40 μA	0.5 mA	1.6 mA		630 Vp	1414 Vp	2500 V	5000 V	
HCPL-2730 <b>HCPL-0730</b>	✓	✓				✓	300 300			✓ ✓	B	1-108
HCPL-2731 <b>HCPL-0731</b>	✓	✓			✓ ✓		400 400		✓ ✓	B		
<b>HCPL-4731</b> <b>HCPL-073A</b>	✓	✓		✓ ✓			800 800		✓ ✓	B	1-92	



### Single Channel 5 MBd Logic Gate Optocoupler (HCPL-2200 Type)

Part Number	Package			I <sub>f</sub> -min		CMR-V/μs (V <sub>CM</sub> )			VDE V <sub>IORM</sub>		Insulation UL = 1 min.		Page No.
	300 mil DIP	SO8	400 mil DIP	1.6 mA	1.8 mA	1000 (50 V)	2500 (400 V)	5000 (1 kV)	630 Vp	1414 Vp	2500 V	5000 V	
HCPL-2200 HCPL-2219	✓ ✓			✓ ✓		✓			A		✓ ✓		1-120
HCPL-2201 <sup>[3]</sup> HCPL-2202 <sup>[3,4]</sup> HCPL-0201 <sup>[3]</sup> <b>HCNW2201<sup>[3]</sup></b>	✓ ✓	✓	✓	✓ ✓ ✓ ✓		✓ ✓ ✓ ✓				✓	✓ ✓ ✓ ✓	✓	1-131
HCPL-2211 <sup>[3]</sup> HCPL-2212 <sup>[3,4]</sup> HCPL-0211 <sup>[3]</sup> <b>HCNW2211<sup>[3]</sup></b>	✓ ✓	✓	✓	✓ ✓ ✓ ✓				✓ ✓ ✓ ✓	A A	✓	✓ ✓ ✓ ✓	✓	

**Notes:**

- 3. Pin 6 not connected.
- 4. Pins 6 and 7 reversed.

**Bold Type = New Product**

A = Option 060  
B = Option 020



### Dual Channel 5 MBd Logic Gate Optocoupler (HCPL-2200 Type)

Part Number	Package			I <sub>f</sub> -min		CMR-V/μs (V <sub>CM</sub> )			VDE		Insulation		Page No.
	300 mil DIP	SO8	400 mil DIP	1.6 mA	1.8 mA	1000 (50 V)	2500 (400 V)	5000 (1 kV)	V <sub>IORM</sub> 630 Vp	1414 Vp	UL = 1 min. 2500 V	5000 V	
HCPL-2231	✓				✓	✓					✓		1-131
HCPL-2232	✓				✓			✓			✓		



### Single Channel 10 MBd Logic Gate Optocoupler (6N137 Type)

Part Number	Package			I <sub>f</sub> -min		CMR-V/μs (V <sub>CM</sub> )			VDE		Insulation		Page No.
	300 mil DIP	SO8	400 mil DIP	2 mA	5mA	100 (50 V)	5000 (50 V)	10000 (1 kV)	V <sub>IORM</sub> 630 Vp	1414 Vp	UL = 1 min. 2500 V	5000 V	
6N137	✓				✓	✓					✓	B	1-146
HCPL-0600		✓			✓	✓					✓		
<b>HCNW137</b>			✓		✓	✓				✓	✓		
HCPL-2601	✓				✓		✓				✓	B	1-166
HCPL-0601		✓			✓		✓				✓		
<b>HCNW2601</b>			✓		✓		✓			✓	✓		
HCPL-2611	✓				✓			✓	A		✓	B	1-166
HCPL-0611		✓			✓			✓			✓		
<b>HCNW2611</b>			✓		✓			✓		✓	✓		
HCPL-261A	✓			✓			✓		A		✓	B	1-166
HCPL-061A		✓		✓			✓				✓		
HCPL-261N	✓			✓				✓	A		✓	B	
HCPL-061N		✓		✓				✓			✓		

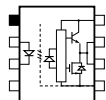


### Dual Channel 10 MBd Logic Gate Optocoupler (6N137 Type)

Part Number	Package			I <sub>f</sub> -min		CMR-V/μs (V <sub>CM</sub> )			VDE		Insulation		Page No.
	300 mil DIP	SO8	400 mil DIP	2 mA	5mA	100 (50 V)	5000 (50 V)	10000 (1 kV)	V <sub>IORM</sub> 630 Vp	1414 Vp	UL = 1 min. 2500 V	5000 V	
HCPL-2630	✓				✓	✓					✓	B	1-146
<b>HCPL-0630</b>		✓			✓	✓					✓		
HCPL-2631	✓				✓		✓				✓	B	
HCPL-4661	✓				✓			✓			✓	B	1-166
<b>HCPL-0661</b>		✓			✓			✓			✓		
HCPL-263A	✓			✓			✓				✓	B	
<b>HCPL-063A</b>		✓		✓			✓				✓		
HCPL-263N	✓			✓				✓			✓	B	
<b>HCPL-063N</b>		✓		✓				✓			✓		

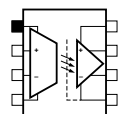
Bold Type = New Product

A = Option 060  
B = Option 020



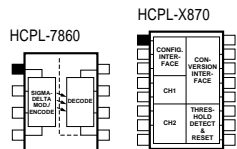
## Integrated Gate Drive Optocouplers

Part Number	I <sub>f</sub> (on) mA	I <sub>out</sub> A (min.)	Prop Delay		PWD μs (max.)	V <sub>CC</sub> V (max.)	CMR-V/μs	Page No.
			t <sub>PHL</sub> μs (max.)	t <sub>PLH</sub> μs (max.)				
HCPL-3000	8	0.6	2.0	5.0	–	13	1.5 kV/μs @ V <sub>CM</sub> = 600 V	1-329
HCPL-3100	12	0.1		2.0	–	24	1.5 kV/μs @ V <sub>CM</sub> = 600 V	1-338
HCPL-3101	16	0.1		0.5	–	24	1.5 kV/μs @ V <sub>CM</sub> = 600 V	
<b>HCPL-3120</b>	7	2	0.5	0.5	0.3	30	15 kV/μs @ V <sub>CM</sub> = 1500 V	1-182
<b>HCPL-3150</b>	7	0.5	0.5	0.5	0.3	30	15 kV/μs @ V <sub>CM</sub> = 1500 V	1-197
<b>HCPL-3160</b>	2.0 A with Integrated Over-Current Protection and Fault Feedback							1-212



## Miniature Isolation Amplifiers

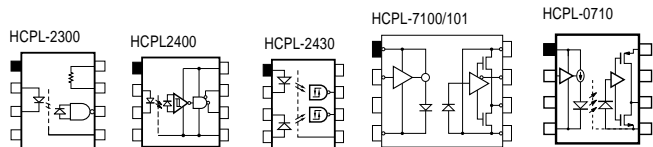
Part Number	Gain Tolerance (max. %)	Non-Linearity (max. %)	Prop Delay μs (max.)	CMR-V/μs (V <sub>CM</sub> )		VDE V <sub>IORM</sub> 600 V	Page No.
				10000 (1000)	20000 (1000)		
HCPL-7800	5	0.35	9.9	✓		✓	1-216
HCPL-7800A/B	1	0.35	9.9	✓		✓	
<b>HCPL-7820</b>	3	0.15	4.1		✓	✓	1-233
<b>HCPL-7825</b>	5	0.15	4.1		✓	✓	
<b>HCPL-7840</b>	5	0.2	9.9	✓			1-248



## Isolated Analog-to-Digital (A/D) Converters

Part Number	Gain Tolerance (max. %)	Integral Non-Linearity (max. %)	SNR (dB)	Effective Radiation (bits)	Signal Delay (μs)	Signal Bandwidth (kHz)	CMR V/μs (V <sub>CM</sub> ) 15000 (1000)	Page No.
<b>HCPL-7860</b> <b>HCPL-7870</b> <b>HCPL-0870</b>	1%	0.15	83	12	19	22	✓	1-260

**Bold Type** = New Product

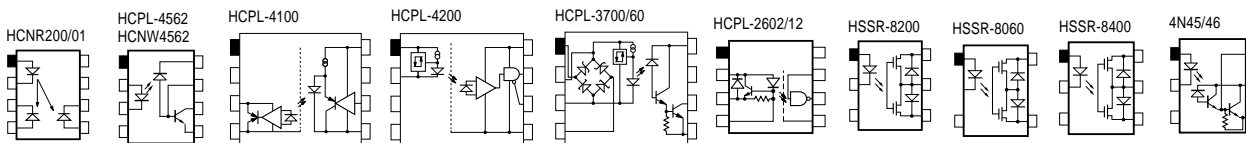


### Other High Speed Logic Gate Optocouplers

Part Number	$I_f$ - mA		Prop Delay max.	CMR $V/\mu s/V_{CM}$	VDE $V_{IORM}$ $V_{PEAK}$	Insulation UL = 1-min. Vac	Page No.
	max.	min.					
HCPL-2300	0.5		200 ns	1000 $V/\mu s @ V_{CM} = 50 V$	630 <sup>[1]</sup>	2500	<a href="#">1-288</a>
HCPL-2400	4		60 ns	1000 $V/\mu s @ V_{CM} = 300 V$	630 <sup>[1]</sup>	2500	<a href="#">1-300</a>
HCPL-2430	4		60 ns	1000 $V/\mu s @ V_{CM} = 50 V$		2500	
HCPL-7100	0.001	[2]	70 ns	2000 $V/\mu s @ V_{CM} = 200 V$	848	3750	<a href="#">1-402</a>
HCPL-7101	0.001	[2]	40 ns	2000 $V/\mu s @ V_{CM} = 200 V$	848	3750	
HCPL-0710	0.001	[2]	40 ns	10,000 $V/\mu s @ V_{CM} = 1000 V$	N/A	2500	<a href="#">1-416</a>

**Notes:**

1. Available with Option 060.
2. Value given is max. input current for a CMOS buffer which drives the LED. Requires isolated input power supply.



### Other Application Specific Optocouplers

Description	Part Number	Page No.
High Linearity Analog	<b>HCNR200/01</b>	<a href="#">1-418</a>
Wide Analog/Video	HCPL-4562 HCNW-4562	<a href="#">1-385</a>
20 mA Current Loop Transmitter	HCPL-4100	<a href="#">1-361</a>
20 mA Current Loop Receiver	HCPL-4200	<a href="#">1-373</a>
AC/DC to Logic Interface	HCPL-3700/60	<a href="#">1-348</a>
Line Receiver	HCPL-2602/12	<a href="#">1-314</a>
200 V, 160 $\Omega$ Solid State Relays	HSSR-8200	<a href="#">1-454</a>
60 V, 0.7 $\Omega$ Solid State Relay	HSSR-8060	<a href="#">1-441</a>
400 V, 10 $\Omega$ Solid State Relay	HSSR-8400	<a href="#">1-465</a>
High CTR-6 pin	4N45/46	<a href="#">1-434</a>

## Optocoupler & Solid State Relay Options

Option Number	Description	Eligible Optocouplers & Solid State Relays	Page No.
001	Commercial Burn-in	All 7.6 mm (300 mil) wide plastic products. Contact factory for availability.	
002	100% Screening Program	All 7.6 mm (300 mil) wide plastic products. Contact factory for availability.	
020	5000 Vac/1 min. UL Rating	See Note 1 for list of part numbers.	1-478
060	630 V, VDE	See Note 2 for list of part numbers.	1-480
300	Gull Wing Surface Mount	Available on most plastic products. Contact factory for list of part numbers.	1-482
500	Tape and Reel Packaging	Available on all plastic DIP and surface mount products. Contact factory for list of part numbers.	1-485

**Notes:**

- Option 020 is available for 6N135, 6N136, 6N137, 6N138, 6N139, HCPL-2502, HCPL-2601, HCPL-2611, HCPL-4502, HCPL-4503, and HCPL-4562.
- Option 060 is available for HCPL-4701, HCPL-2219, HCPL-2211, HCPL-2212, HCPL-4503, HCPL-4504, HCPL-4506, HCPL-2611, HCPL-261A, HCPL-261N, HCPL-2400, HCPL-3120, HCPL-2300, HCPL-3150.

<b>Hermetic and Hi-Rel Optocouplers Selection Guide</b>	<b>Page No.</b>
	1-493