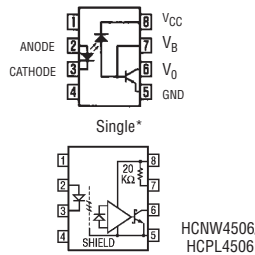
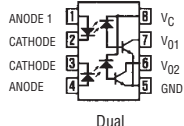


Agilent Technologies Optocouplers — Continued

Transistor Output – Single and Dual, High Speed 1Mbd Data-Rate



6N Series HCNW135/6,
 HCPL Series HCNW135/6,
 Standard width body, 0.3" row spacing
 Wide body, 0.4" row spacing

Note: *HCNW4502/3, HCPL4502/3, and HCPL4504 are similar to 6N136, but have pin 7 unconnected, giving improved ESD protection.

All types are **UL** recognised.

The HCNW135 is for use in TTL/CMOS, TTL/LSTTL or wide bandwidth analogue applications. The HCNW136 and SFH6136 are designed for high speed TTL/TTL applications.

Typical data rate (NRZ) 1Mbit/s
 Output voltage V_0 15V max
 Supply voltage V_{CC} 15V max
 Common mode transient immunity: HCPL4503/6, HCNW4503/6 15,000V/ μ s (min), and HCPL4534 30,000V/ μ s (typ.) @ $V_{CM} = 1500V$ 1,000V/ μ s (typ.)

Channels	Isolation Test Voltage ac rms	Curr. Trsfr. Ratio @ $I_F = 16mA$ min.	Switching Time (μ s) typ.	t_{PHL}	t_{PLH}	Mfr.	Mfrs. List No.	Order Code
Single	5000	19%	0.2	0.35	0.55	HP	HCNW136**	325-715
Single	5000	44%*	0.4	0.55	0.55	HP	HCPL4506**	655-193
Single	5000	44%*	0.4	0.55	0.55	HP	HCNW4506**	655-200
Single	2500	7%	0.2	1.3	0.6	HP	6N135	325-727
Single	2500	19%	0.2	0.6	0.6	HP	6N136	325-739
Single	2500	19%	0.2	0.6	0.6	HP	HCPL4502	325-752
Single	2500	15%	0.2	0.6	0.6	HP	HCPL4503	325-764
Single	5000	19%	0.2	0.6	0.6	HP	HCNW4503**	941-979
Dual	2500	15%	0.2	0.6	0.6	HP	HCPL4534	941-906
Dual	2500	7%	0.2	1.3	0.6	HP	HCPL2530	325-790
Dual	2500	19%	0.2	0.6	0.6	HP	HCPL2531	325-806

* $I_F = 10mA$, ** = Wide body packages, **VDE 0884**, **BS415** approved

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Mfrs. List No.	Order Code	1+	25+	100+	250+	500+
HCNW136	.325-715					
HCPL4506	655-193					
HCNW4506	655-200					
6N135	325-727					
6N136	325-739					
HCPL4502	325-752					
HCPL4503	325-764					
HCNW4503	941-979					
HCPL4534	941-906					
HCPL2530	325-790					
HCPL2531	325-806					

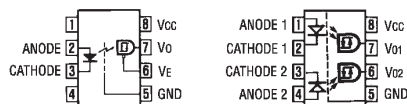
Price Each

HP Designers Guide to Isolation Circuits **946-412**
 HP Regulators Guide to Isolation Circuits **946-400**

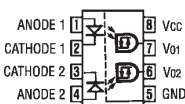
Schmitt Trigger Output – Low Current, High Speed 5Mbd Data-Rate



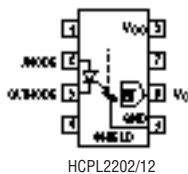
UL recognised



HCP2200/01/11/19
 HCNW2201/11 (Wide)
 (Body versions)



HCPL2231
 HCPL2232



HCPL2202/12

Note: HCPL2201/11 and HCNW2201/11 have pin 6 unconnected (no voltage enable). The HCNW2201/11 are housed in wide body packages approved to **VDE 0884** and **BS415**.

Low input current, logic gates with Schmitt trigger output. Compatible with CMOS, LSTTL and TTL logic.

Supply voltage 4.5-20V

Channels	CMR (V/ μ s) (min.)	Isolation Test Voltage V rms	Output (ns) t_r	t_f	I_F (on)	Mfrs. List No.	Order Code
Single	1000	2500	55	15	1.6	HCPL2200	326-938
Single	1000	2500	30	7	1.6	HCPL2201	326-940
Single	1000	2500	30	7	1.6	HCPL2202	942-005
Single	1000	5000	30	7	1.6	HCNW2201	942-017
Single	2500	2500	55	15	1.6	HCPL2219	942-029
Single	5000*	2500	30	7	1.6	HCPL2211	326-951
Single	5000*	2500	30	7	1.6	HCPL2212	942-030
Single	5000*	5000	30	7	1.6	HCNW2211	942-042
Dual	1000	2500	30	7	1.8	HCPL2231	326-963
Dual	5000*	2500	30	7	1.8	HCPL2232	232-932

*Minimum CMR of 10kV/ μ s with $V_{CM} = 1000V$ can be achieved with input current, I_F of 5mA

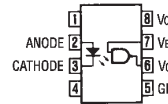
OPT160

Mfrs. List No.	Order Code	1+	25+	100+	250+	500+
Single Channel						
HCPL2200	326-938					
HCPL2201	326-940					
HCPL2202	942-005					
HCNW2201	942-017					
HCPL2219	942-029					
HCPL2211	326-951					
HCPL2212	942-030					
HCNW2211	942-042					
Dual Channel						
HCPL2231	326-963					
HCPL2232	232-932					

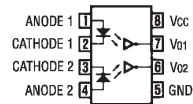
Price Each

HP Designers Guide to Isolation Circuits **946-412**
 HP Designers Guide to Isolation Circuits **946-400**

Logic Gate Output – Single and Dual, High Speed 40Mbd and 40Mbd Data-Rate



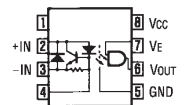
6N137/HCPL2601/2611
 HCNW137/2601/2611



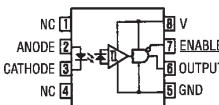
HCPL2630/
 2631/4661

All **UL** recognised,
 HCPL7601/11, HCNW137/2601/2611
 are **VDE 0884** approved

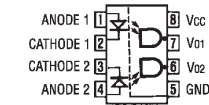
HCNW137/2601/2611 are wide body versions



HCPL2602/2612



HCPL2400/2411



HCPL2430



HCPL261A/261N



HCPL263A/263N

Withstand test voltage = 2500Vrms (HCPL7601/11 = 3750V rms)
 (HCNW137/2601/2611 = 5000V rms)

Channels	CMR (min.) (V/ μ s)	Input On-Current @ (VCM) (mA)	Output Enable	Prop. Delay (ns) typ.	t_{PHL}	t_{PLH}	Mfrs. List No.
10Mbd Data-Rate (Typical), LSTTL/TTL Compatible							
Single	N/A	N/A	5	Yes	50	48	6N137
Single	5000	50	5	Yes	50	48	HCPL2601
Single	10000	1000	5	Yes	50	48	HCPL2611
Single	10000	1000	5	Yes	50	48	HCNW2611
Dual	N/A	N/A	5	Yes	50	48	HCPL2630
Dual	5000	50	5	Yes	50	48	HCPL2631
Dual	10000	1000	5	No	50	48	HCPL4661
10Mbd Data-Rate (Typical), HCMOS/LSTTL/TTL Compatible							
Single	1000	50	3	Yes	53	52	HCPL261A
Single	1000*	1000	3	Yes	53	52	HCPL261N
Dual	1000	50	3	No	53	52	HCPL263A
Dual	1000*	1000	3	No	53	52	HCPL263N
10Mbd Data-Rate (Typical), CMOS/TTL compatible - Low Current Input							
Single	1000	50	2	No	57	55	HCPL7601
Single	10000	1000	2	No	57	55	HCPL7611
10Mbd Data-Rate (Typical), High CMR Line Receiver							
Single	1000	50	5	Yes	50	48	HCPL2602
Single	3500	300	5	Yes	50	48	HCPL2612
40Mbd Data-Rate (Typical), HCMOS/LSTTL/TTL Compatible							
Single	1000	50	4	3 State	33	30	HCPL2400
Single	1000	300	4	Output	33	30	HCPL2411
Dual	1000	50	4	Output	33	30	HCPL2430

*15kV/ μ s with $V_{CM} = 1kV$ can be achieved using HP application circuit

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