

# 4 Pin DIL & SMD Optocouplers

Transistor Output												
Part Number	Features	Current Transfer Ratio $I_F = 5\text{mA}$ $V_{CE} = 5\text{V}$ Min (%)	Isolation Voltage Min (KV)	Continuous Forward Current Max (mA)	$V_{BR}$ $I_R = 10\mu\text{A}$ Min (V)	$BV_{CEO}$ $I_C = 0.5\text{mA}$ Min (V)	$I_{CEO(Dark)}$ $V_{CE} = 20\text{V}$ Max (nA)	$V_{CE(SAT)}$ $I_F = 8\text{mA}$ $I_C = 2.4\text{mA}$ Max (V)				
ISP321-1	Single channel Optocoupler with a Phototransistor Output	50-600	7.5(pk) 5.3(rms)	50	6	80	100	0.4				
ISP521-1		50-600				55						
ISP621-1		50-600				35			0.2( $I_F = 20\text{mA}$ ) ( $I_C = 1\text{mA}$ )			
ISP817		50-600				55			0.4( $I_F = 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )			
ISP624-1		100-1200 <sup>1</sup>				80			0.3( $I_F = 10\text{mA}$ ) ( $I_C = 2\text{mA}$ )			
PS2501-1		80-600				70			0.4( $I_F = 10\text{mA}$ ) ( $I_C = 2.5\text{mA}$ )			
SFH615A-1		40-80/13 ( $I_F = 10\text{mA}/1\text{mA}$ )					50 ( $V_{CE} = 10\text{V}$ )					
SFH615A-2		63-125/22 ( $I_F = 10\text{mA}/1\text{mA}$ )					100 ( $V_{CE} = 10\text{V}$ )					
SFH615A-3		100-200/34 ( $I_F = 10\text{mA}/1\text{mA}$ )					50 ( $V_{CE} = 10\text{V}$ )					
SFH615A-4		160-320/56 ( $I_F = 10\text{mA}/1\text{mA}$ )					100 ( $V_{CE} = 10\text{V}$ )					
SFH617A-1		40-80/13 ( $I_F = 10\text{mA}/1\text{mA}$ )					55	0.4( $I_F = 1\text{mA}$ ) ( $I_C = 0.32\text{mA}$ )				
SFH617A-2		63-125/22 ( $I_F = 10\text{mA}/1\text{mA}$ )								50 ( $V_{CE} = 10\text{V}$ )		
SFH617A-3		100-200/34 ( $I_F = 10\text{mA}/1\text{mA}$ )								100 ( $V_{CE} = 10\text{V}$ )		
SFH617A-4		160-320/56 ( $I_F = 10\text{mA}/1\text{mA}$ )								100 ( $V_{CE} = 10\text{V}$ )	0.4( $I_F = 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )	
SFH618A-2		63-125 <sup>1</sup>										0.4( $I_F = 1\text{mA}$ ) ( $I_C = 1.25\text{mA}$ )
SFH618A-3		100-200 <sup>1</sup>										
SFH618A-4		160-320 <sup>1</sup>					0.4( $I_F = 1\text{mA}$ ) ( $I_C = 1.25\text{mA}$ )					
SFH618A-5		250-500 <sup>1</sup>						35		0.4( $I_F = 5\text{mA}$ ) ( $I_C = 1\text{mA}$ )		
TIL191		20										
TIL191A		50										
TIL191B		100										
TLP321		50-600					80	0.4				
TLP521		50-600										
TLP621		50-600										
TLP624		100-1200 <sup>1</sup>				55			0.4( $I_F = 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )			

Note 1 Test Condition:  $I_F = 1\text{mA}$   $V_{CE} = 0.5\text{V}$

AC Input											
Part Number	Features	Current Transfer Ratio $I_F = \pm 10\text{mA}$ $V_{CE} = 5\text{V}$ Min (%)	Isolation Voltage Min (KV)	Continuous Forward Current Max (mA)	$V_F$ $I_F = \pm 20\text{mA}$ Max (V)	$BV_{CEO}$ $I_C = 1\text{mA}$ Min (V)	$I_{CEO(Dark)}$ $V_{CE} = 20\text{V}$ Max (nA)	$V_{CE(SAT)}$ Max (V)			
ISP620-1	Single channel Optocoupler with two infrared LED's wired in inverse parallel allowing operation with AC input voltage	40-125 <sup>1</sup>	7.5(pk) 5.3(rms)	50mA	1.4	55 ( $I_C = 0.5\text{mA}$ )	100 ( $V_{CE} = 24\text{V}$ )	0.4( $I_F = \pm 8\text{mA}$ ) ( $I_C = 2.4\text{mA}$ )			
ISP626-1		100 <sup>2</sup> 50 <sup>3</sup>						0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )			
ISP814		20-300 <sup>4</sup>						0.2( $I_F = \pm 20\text{mA}$ ) ( $I_C = 1\text{mA}$ )			
ISP814-1		80 <sup>5</sup>				100	0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.8\text{mA}$ )				
ISP814-2		/40/80 <sup>5</sup>					0.4( $I_F = \pm 0.5\text{mA}$ ) ( $I_C = 0.2\text{mA}$ )				
ISP814-3		20/40/80 <sup>5</sup>					0.4( $I_F = \pm 0.25\text{mA}$ ) ( $I_C = 0.05\text{mA}$ )				
PS2505-1		80-600				80	100 ( $V_{CE} = 40\text{V}$ )	0.3( $I_F = \pm 10\text{mA}$ ) ( $I_C = 2\text{mA}$ )			
SFH620-1		40-125				70	50	0.4( $I_F = \pm 10\text{mA}$ ) ( $I_C = 2.5\text{mA}$ )			
SFH620-2		63-200							100		
SFH620-3		100-320							50		
SFH620A-1		40-125							100	0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )	
SFH620A-2		63-200									0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.8\text{mA}$ )
SFH620A-3		100-320									
SFH628-2		63-200 <sup>2</sup>				55	200 ( $V_{CE} = 10\text{V}$ )	0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.5\text{mA}$ )			
SFH628-3		100-320 <sup>2</sup>							0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 0.8\text{mA}$ )		
SFH628-4		160-500 <sup>2</sup>								0.4( $I_F = \pm 1\text{mA}$ ) ( $I_C = 1.25\text{mA}$ )	

# 4 Pin DIL & SMD Optocouplers

## AC Input

Part Number	Features	Current Transfer Ratio $I_F = \pm 10\text{mA}$ $V_{CE} = 5\text{V}$ Min (%)	Isolation Voltage Min (KV)	Continuous Forward Current Max (mA)	$V_F$ $I_F = \pm 20\text{mA}$ Max (V)	$BV_{CEO}$ $I_C = 1\text{mA}$ Min (V)	$I_{CEO(\text{Dark})}$ $V_{CE} = 20\text{V}$ Max (nA)	$V_{CE(\text{SAT})}$ Max (V)
SFH628A-2	Single channel Optocoupler with two infrared LED's wired in reverse parallel allowing operation with AC input voltage	63-200 <sup>2</sup>	7.5(pk) 5.3(rms)	$\pm 50$	1.4	55	200 ( $V_{CE}=10\text{V}$ )	0.4( $I_F=\pm 1\text{mA}$ ) ( $I_C=0.5\text{mA}$ )
SFH628A-3		100-320 <sup>2</sup>						0.4( $I_F=\pm 1\text{mA}$ ) ( $I_C=0.8\text{mA}$ )
SFH628A-4		160-500 <sup>2</sup>						0.4( $I_F=\pm 1\text{mA}$ ) ( $I_C=1.25\text{mA}$ )
TIL194		20				100 ( $V_{CE}=24\text{V}$ )	55	0.4( $I_F=\pm 5\text{mA}$ ) ( $I_C=1\text{mA}$ )
TIL194A		50						0.4( $I_F=\pm 8\text{mA}$ ) ( $I_C=2.4\text{mA}$ )
TIL194B		100						0.4( $I_F=\pm 1\text{mA}$ ) ( $I_C=0.5\text{mA}$ )
TLP620-1		40-125 <sup>1</sup>						
TLP626-1		100 <sup>2</sup> 50 <sup>3</sup>						

Note 1: Test Condition  $I_F = \pm 5\text{mA}$

Note 2: Test Condition  $I_F = \pm 1\text{mA}$ ,  $V_{CE} = 0.5\text{V}$

Note 3: Test Condition  $I_F = \pm 0.5\text{mA}$ ,  $V_{CE} = 1.5\text{V}$

Note 4: Test Condition  $I_F = \pm 1\text{mA}$

Note 5: Test Condition  $I_F = \pm 0.25 / \pm 0.5 / \pm 1\text{mA}$ ,  $V_{CE} = 5\text{V}$

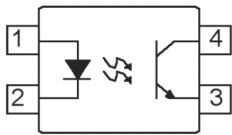
## Darlington Output

Part Number	Features	Current Transfer Ratio $I_F = \pm 1\text{mA}$ $V_{CE} = 1\text{V}$ Min (%)	Isolation Voltage Min (KV)	Continuous Forward Current Max (mA)	$V_F$ $I_F = 20\text{mA}$ Max (V)	$V_{BR}$ $I_R = 10\mu\text{A}$ Min (V)	$BV_{CEO}$ $I_C = 1\text{mA}$ Min (V)	$I_{CEO(\text{Dark})}$ $V_{CE} = 10\text{V}$ Max (nA)	$V_{CE(\text{SAT})}$ Max (V)
IS627	Single channel Optocoupler with a Photo-Darlington Transistor	1000-15000 ( $V_{CE}=2\text{V}$ )	7.5(pk) 5.3(rms)	50	1.4	6	300 <sup>2</sup> ( $I_C=0.1\text{mA}$ )	200 ( $V_{CE}=200\text{V}$ )	1.2( $I_F=10\text{mA}$ ) ( $I_C = 100\text{mA}$ )
ISP815		600-7500 ( $V_{CE}=2\text{V}$ )						35 ( $I_C=0.1\text{mA}$ )	1( $I_F=20\text{mA}$ , $I_C=5\text{mA}$ )
ISP815-1		/800 <sup>1</sup>						70	1( $I_F=1\text{mA}$ ) ( $I_C=8\text{mA}$ )
ISP815-2		/400/800 <sup>1</sup>							1( $I_F=0.5\text{mA}$ ) ( $I_C=2\text{mA}$ )
ISP815-3		200/400/800 <sup>1</sup>							1( $I_F=0.25\text{mA}$ ) ( $I_C=0.5\text{mA}$ )
PS2502-1		200-2000						80	1( $I_F=1\text{mA}$ ) ( $I_C=2\text{mA}$ )
TIL197		500-7500						35	1( $I_F = \text{mA}$ ) ( $I_C=10\text{mA}$ )
TIL197A		1000-7500							
TIL197B		1500-7500							

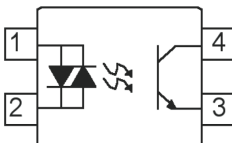
Note 1: Test Condition  $I_F = 0.25 / 0.5 / 1\text{mA}$ ,  $V_{CE}=1\text{V}$

Note 2: Device has a reverse biased diode connected between pins 3 and 4 giving high breakdown stability

## Transistor Output



## AC Input



## Darlington Output

