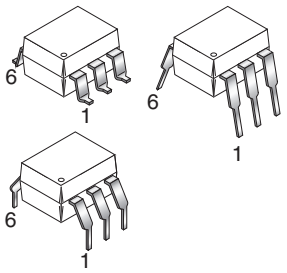
FAIRCHILD
SEMICONDUCTOR®

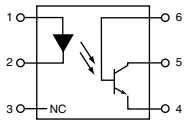
GENERAL PURPOSE 6-PIN PHOTOTRANSISTOR OPTOCOUPLERS

4N25	4N26	4N27	4N28	4N35	4N36
4N37	H11A1	H11A2	H11A3	H11A4	H11A5

WHITE PACKAGE (-M SUFFIX)

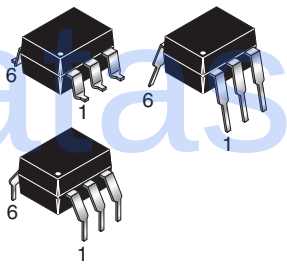


SCHEMATIC



PIN 1. ANODE
2. CATHODE
3. NO CONNECTION
4. EMITTER
5. COLLECTOR
6. BASE

BLACK PACKAGE (NO -M SUFFIX)



DESCRIPTION

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode driving a silicon phototransistor in a 6-pin dual in-line package.

FEATURES

- UL recognized (File # E90700)
- VDE recognized (File # 94766)
  - Add option V for white package (e.g., 4N25V-M)
  - Add option 300 for black package (e.g., 4N25.300)
- Also available in white package by specifying -M suffix, eg. 4N25-M

APPLICATIONS

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Units
TOTAL DEVICE			
Storage Temperature	T_{STG}	-55 to +150	°C
Operating Temperature	T_{OPR}	-55 to +100	°C
Lead Solder Temperature	T_{SOL}	260 for 10 sec	°C
Total Device Power Dissipation @ T_A = 25°C	P_D	250	mW
Derate above 25°C		3.3 (non-M), 2.94 (-M)	
EMITTER			
DC/Average Forward Input Current	I_F	100 (non-M), 60 (-M)	mA
Reverse Input Voltage	V_R	6	V
Forward Current - Peak (300µs, 2% Duty Cycle)	I_F(pk)	3	A
LED Power Dissipation @ T_A = 25°C	P_D	150 (non-M), 120 (-M)	mW
Derate above 25°C		2.0 (non-M), 1.41 (-M)	mW/°C
DETECTOR			
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Base Voltage	V_{CBO}	70	V
Emitter-Collector Voltage	V_{ECO}	7	V
Detector Power Dissipation @ T_A = 25°C	P_D	150	mW
Derate above 25°C		2.0 (non-M), 1.76 (-M)	mW/°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

INDIVIDUAL COMPONENT CHARACTERISTICS

Parameter	Test Conditions	Symbol	Min	Typ**	Max	Unit
EMITTER						
Input Forward Voltage	(I_F = 10 mA)	V_F		1.18	1.50	V
Reverse Leakage Current	(V_R = 6.0 V)	I_R		0.001	10	µA
DETECTOR						
Collector-Emitter Breakdown Voltage	(I_C = 1.0 mA, I_F = 0)	BV_{CEO}	30	100		V
Collector-Base Breakdown Voltage	(I_C = 100 µA, I_F = 0)	BV_{CBO}	70	120		V
Emitter-Collector Breakdown Voltage	(I_E = 100 µA, I_F = 0)	BV_{ECO}	7	10		V
Collector-Emitter Dark Current	(V_{CE} = 10 V, I_F = 0)	I_{CEO}		1	50	nA
Collector-Base Dark Current	(V_{CB} = 10 V)	I_{CBO}			20	nA
Capacitance	(V_{CE} = 0 V, f = 1 MHz)	C_{CE}		8		pF

ISOLATION CHARACTERISTICS

Characteristic	Test Conditions	Symbol	Min	Typ**	Max	Units
Input-Output Isolation Voltage	(Non-'M', Black Package) (f = 60 Hz, t = 1 min)	V_{ISO}	5300			Vac(rms)*
	('-M', White Package) (f = 60 Hz, t = 1 sec)		7500			Vac(pk)
Isolation Resistance	(V_{I-O} = 500 VDC)	R_{ISO}	10^{11}			Ω
Isolation Capacitance	(V_{I-O} = &, f = 1 MHz)	C_{ISO}		0.5		pF
	('-M' White Package)			0.2	2	pF

Note
* 5300 Vac(rms) for 1 minute equates to approximately 9000 Vac (pk) for 1 second
** Typical values at T_A = 25°C

TRANSFER CHARACTERISTICS (T_A = 25°C Unless otherwise specified.)

DC Characteristic	Test Conditions	Symbol	Device	Min	Typ**	Max	Unit
Current Transfer Ratio, Collector to Emitter	(I_F = 10 mA, V_{CE} = 10 V)	CTR	4N35 4N36 4N37	100			%
			H11A1	50			
			H11A5	30			
			4N25 4N26 H11A2 H11A3	20			
			4N27 4N28 H11A4	10			
	(I_F = 10 mA, V_{CE} = 10 V, T_A = -55°C)		4N35 4N36 4N37	40			
	(I_F = 10 mA, V_{CE} = 10 V, T_A = +100°C)		4N35 4N36 4N37	40			
Collector-Emitter Saturation Voltage	(I_C = 2 mA, I_F = 50 mA)	$V_{CE\ (SAT)}$	4N25 4N26 4N27 4N28			0.5	V
	(I_C = 0.5 mA, I_F = 10 mA)		4N35 4N36 4N37			0.3	
			H11A1 H11A2 H11A3 H11A4 H11A5			0.4	
AC Characteristic Non-Saturated Turn-on Time	(I_F = 10 mA, V_{CC} = 10 V, R_L = 100Ω) (Fig.20)	T_{ON}	4N25 4N26 4N27 4N28 H11A1 H11A2 H11A3 H11A4 H11A5		2		µs
Non Saturated Turn-on Time	(I_C = 2 mA, V_{CC} = 10 V, R_L = 100Ω) (Fig.20)	T_{ON}	4N35 4N36 4N37		2	10	µs

TRANSFER CHARACTERISTICS (T_A = 25°C Unless otherwise specified.) (Continued)

AC Characteristic	Test Conditions	Symbol	Device	Min	Typ**	Max	Unit
Turn-off Time	(I_F = 10 mA, V_{CC} = 10 V, R_L = 100Ω) (Fig.20)	T_{OFF}	4N25 4N26 4N27 4N28 H11A1 H11A2 H11A3 H11A4 H11A5		2		µs
	(I_C = 2 mA, V_{CC} = 10 V, R_L = 100Ω) (Fig.20)		4N35 4N36 4N37		2	10	

** Typical values at T_A = 25°C

TYPICAL PERFORMANCE CURVES

Fig. 1 LED Forward Voltage vs. Forward Current (Black Package)

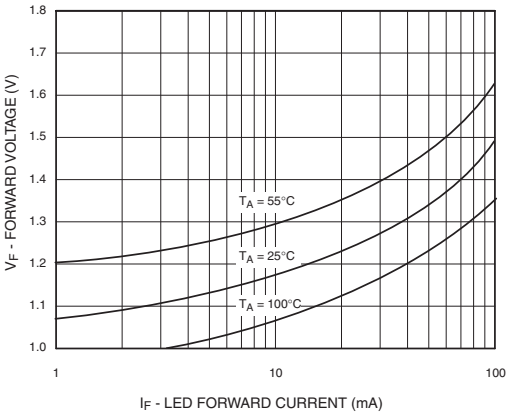


Fig. 2 LED Forward Voltage vs. Forward Current (White Package)

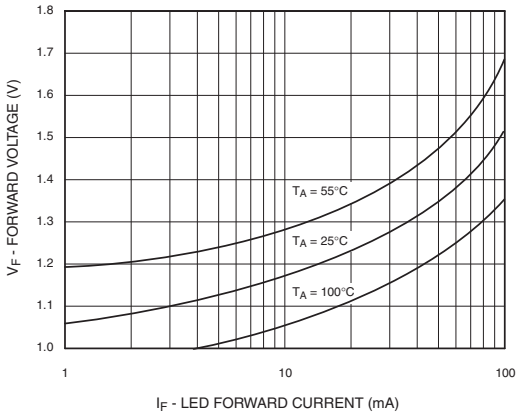


Fig.3 Normalized CTR vs. Forward Current (Black Package)

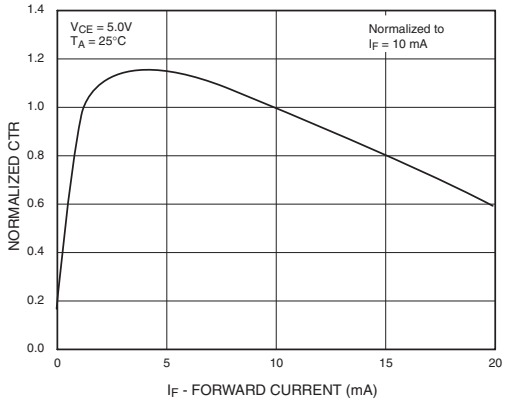


Fig.4 Normalized CTR vs. Forward Current (White Package)

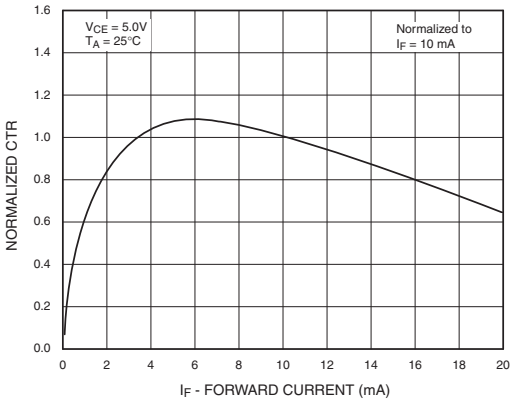


Fig. 5 Normalized CTR vs. Ambient Temperature (Black Package)

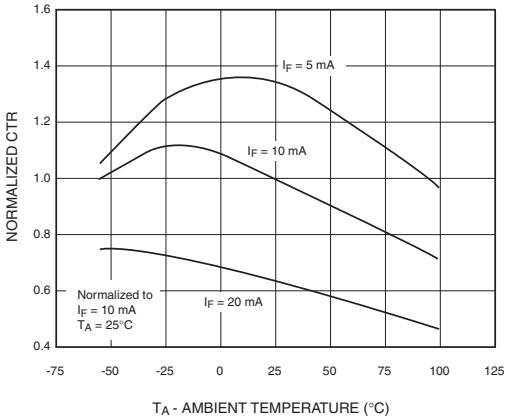


Fig. 6 Normalized CTR vs. Ambient Temperature (White Package)

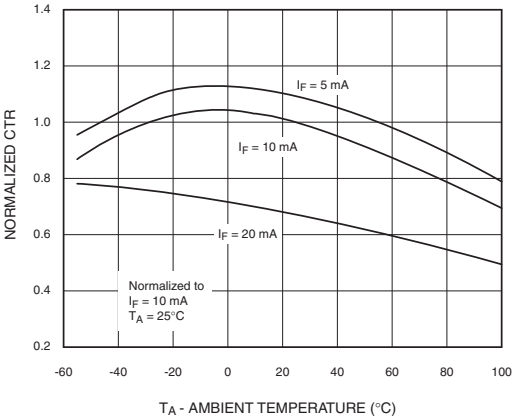


Fig. 7 CTR vs. RBE (Unsaturated) (Black Package)

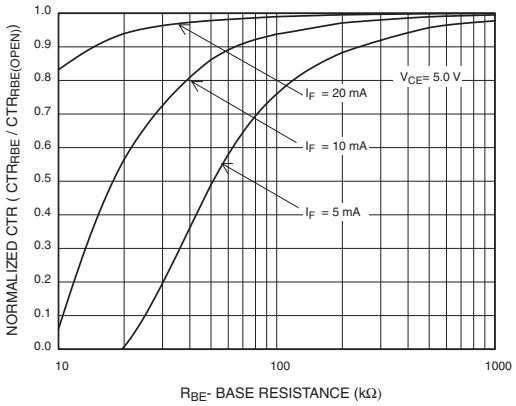


Fig. 8 CTR vs. RBE (Unsaturated) (White Package)

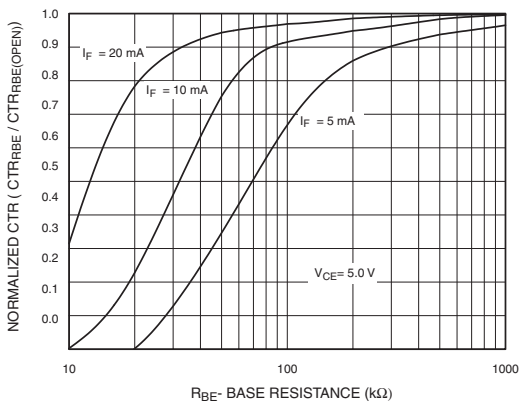


Fig. 9 CTR vs. RBE (Saturated) (Black Package)

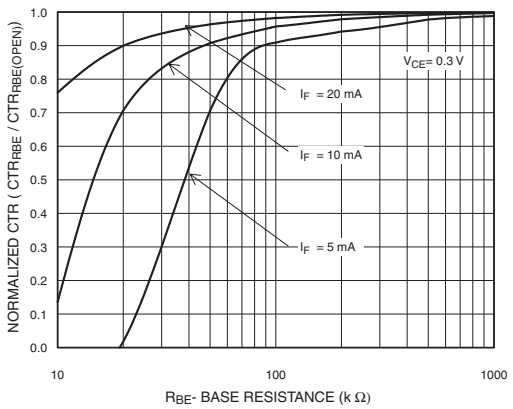


Fig. 10 CTR vs. RBE (Saturated) (White Package)

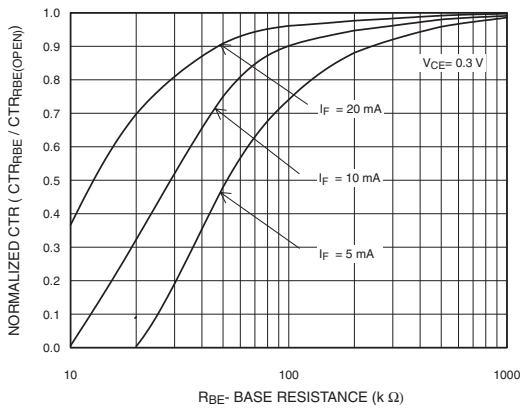


Fig. 11 Collector-Emitter Saturation Voltage vs Collector Current (Black Package)

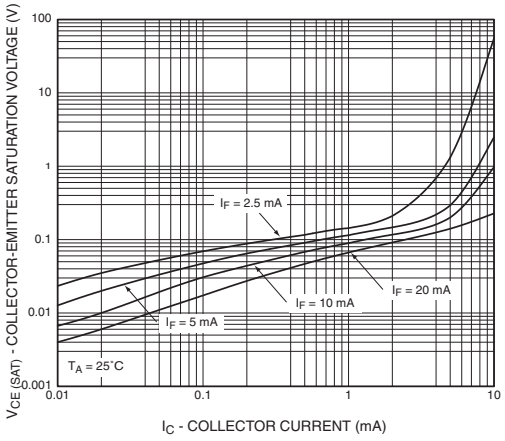


Fig. 12 Collector-Emitter Saturation Voltage vs Collector Current (White Package)

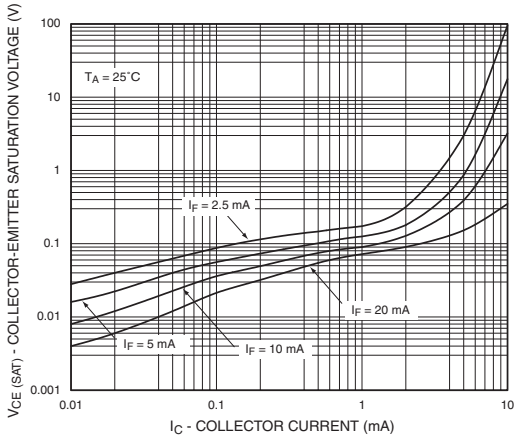


Fig. 13 Switching Speed vs. Load Resistor (Black Package)

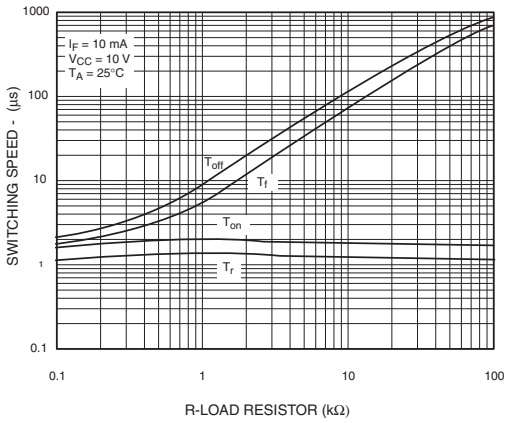


Fig. 14 Switching Speed vs. Load Resistor (White Package)

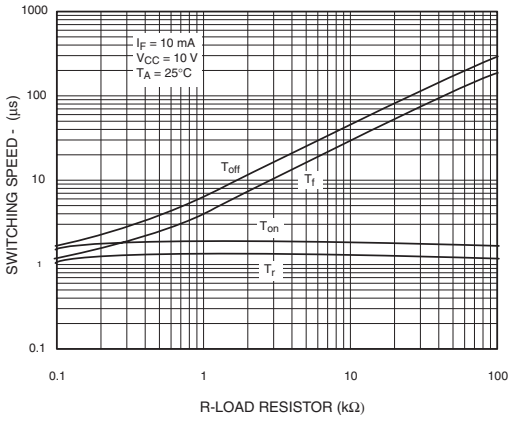


Fig. 15 Normalized t_{on} vs. R_{BE} (Black Package)

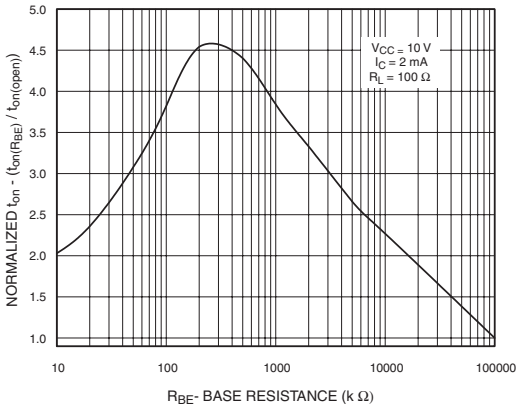


Fig. 16 Normalized t_{on} vs. R_{BE} (White Package)

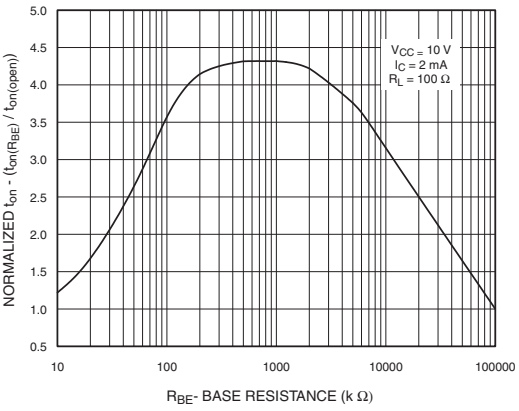


Fig. 17 Normalized t_{off} vs. R_{BE} (Black Package)

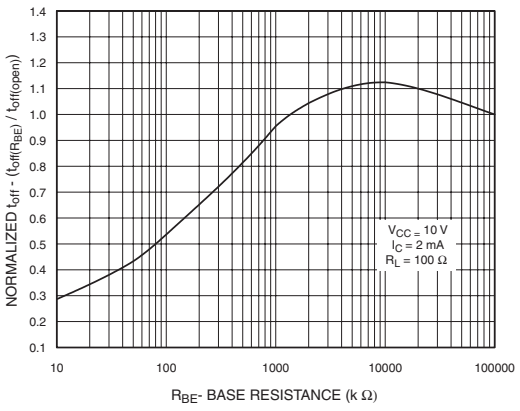


Fig. 18 Normalized t_{off} vs. R_{BE} (White Package)

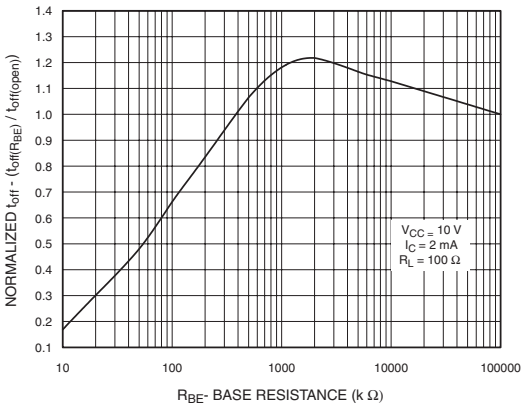
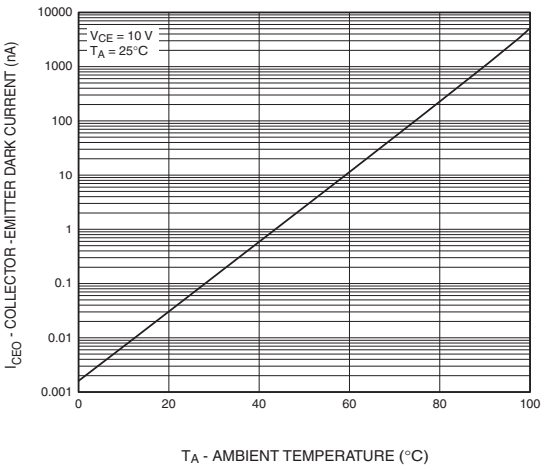


Fig. 19 Dark Current vs. Ambient Temperature



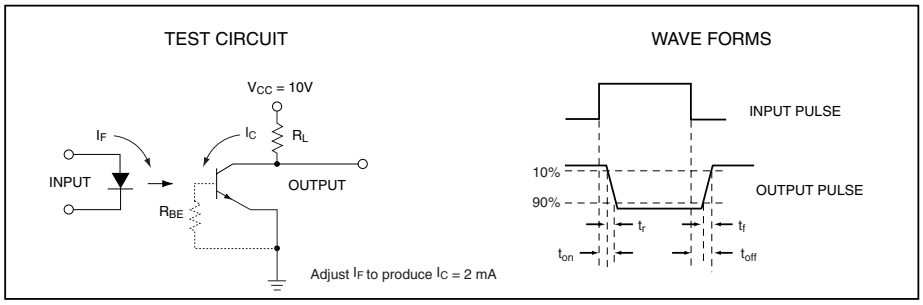


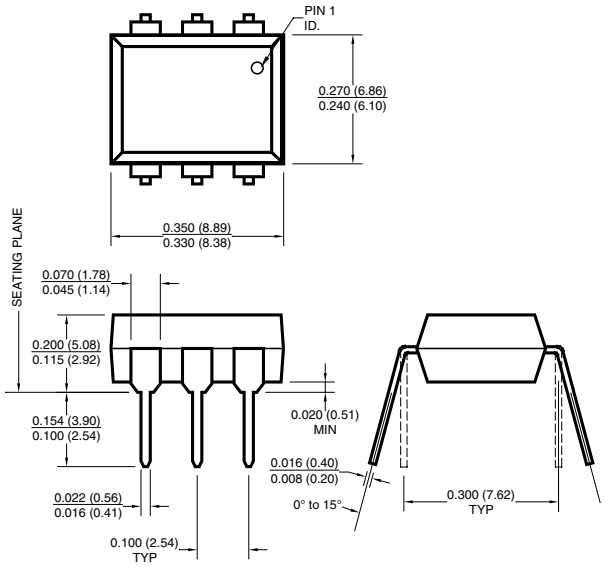
Figure 20. Switching Time Test Circuit and Waveforms

GENERAL PURPOSE 6-PIN PHOTOTRANSISTOR OPTOCOUPLERS

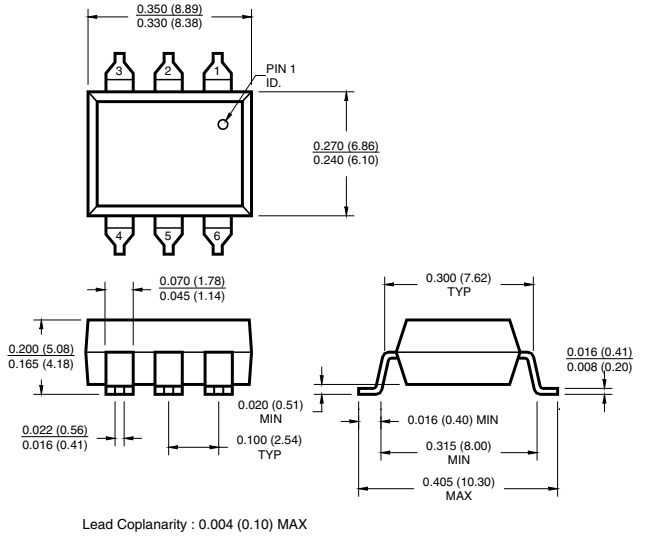
4N25	4N26	4N27	4N28	4N35	4N36
4N37	H11A1	H11A2	H11A3	H11A4	H11A5

Black Package (No -M Suffix)

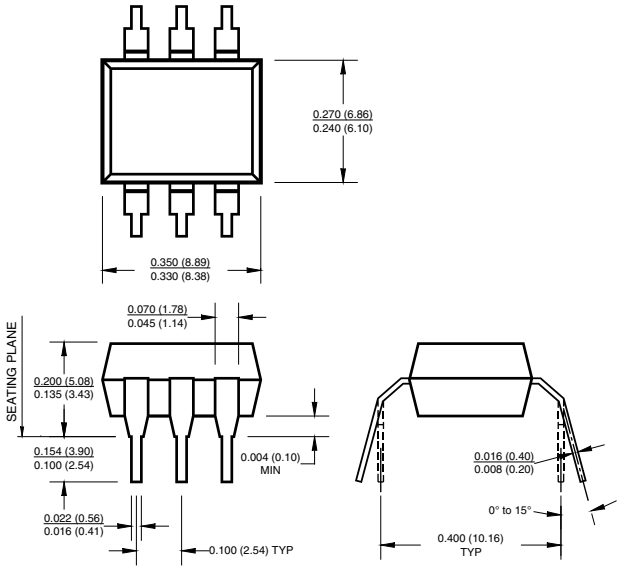
Package Dimensions (Through Hole)



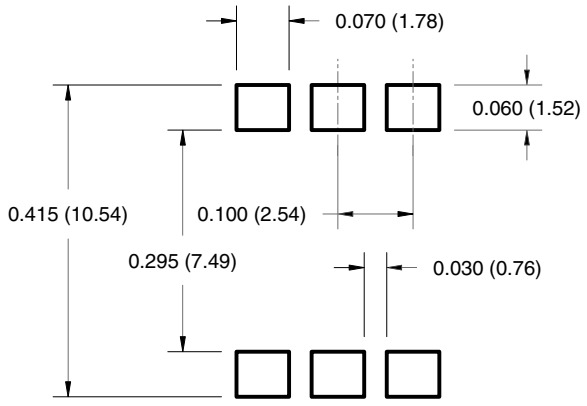
Package Dimensions (Surface Mount)



Package Dimensions (0.4" Lead Spacing)



Recommended Pad Layout for Surface Mount Leadform



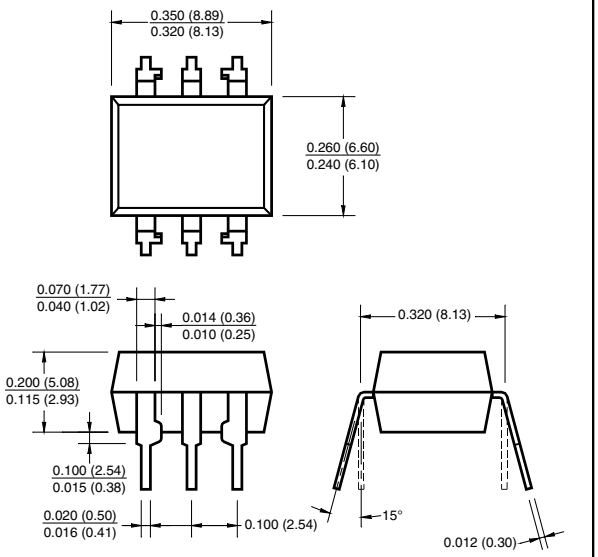
NOTE
All dimensions are in inches (millimeters)

GENERAL PURPOSE 6-PIN PHOTOTRANSISTOR OPTOCOUPLERS

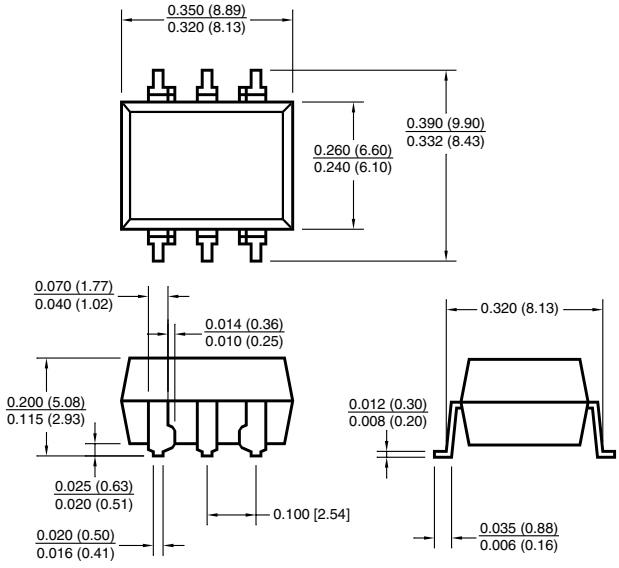
4N25	4N26	4N27	4N28	4N35	4N36
4N37	H11A1	H11A2	H11A3	H11A4	H11A5

White Package (-M Suffix)

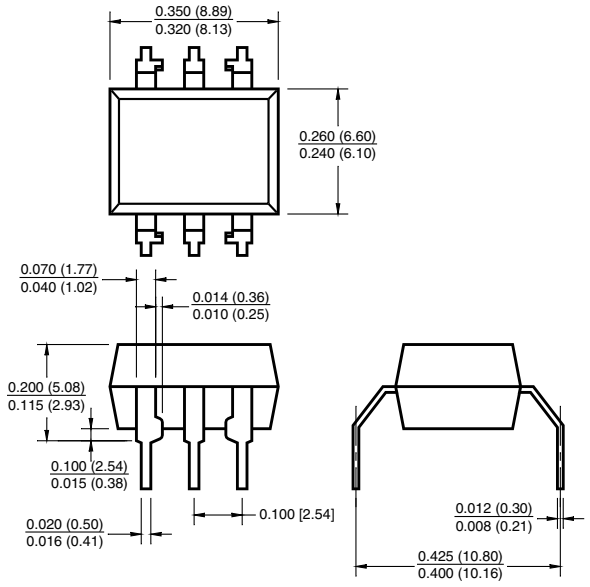
Package Dimensions (Through Hole)



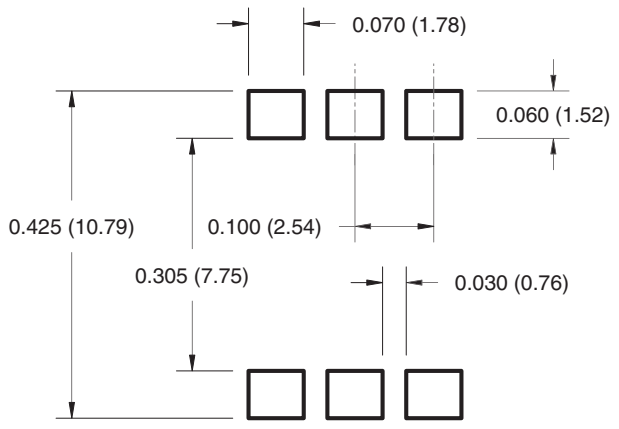
Package Dimensions (Surface Mount)



Package Dimensions (0.4" Lead Spacing)



Recommended Pad Layout for Surface Mount Leadform

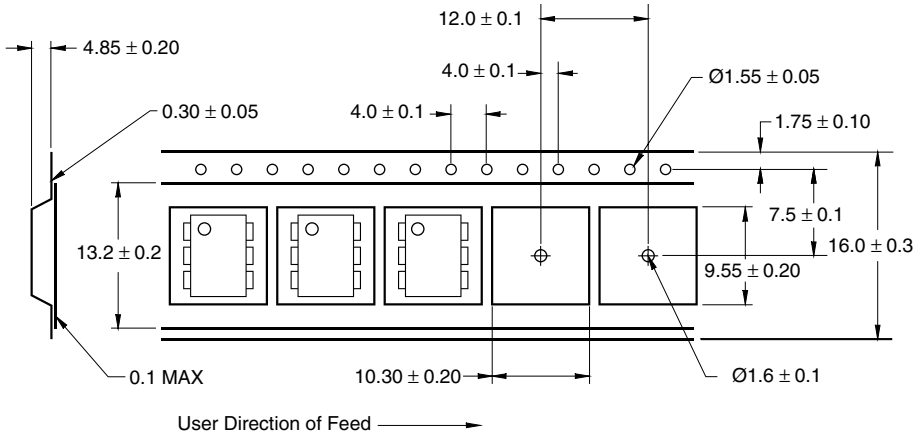


NOTE
All dimensions are in inches (millimeters)

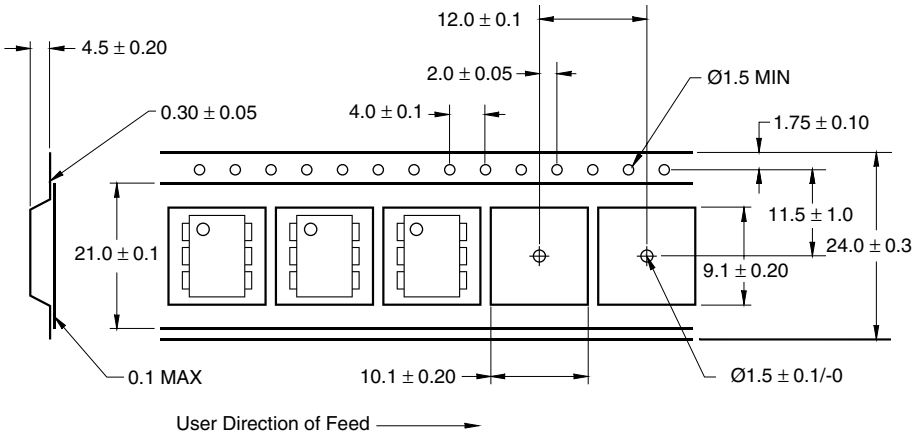
ORDERING INFORMATION

Order Entry Identifier		
Black Package (No Suffix)	**White Package (-m Suffix)**	**Option**
.S	S	Surface Mount Lead Bend
.SD	SR2	Surface Mount; Tape and reel
.W	T	0.4" Lead Spacing
.300	V	VDE 0884
.300W	TV	VDE 0884, 0.4" Lead Spacing
.3S	SV	VDE 0884, Surface Mount
.3SD	SR2V	VDE 0884, Surface Mount, Tape & Reel

QT Carrier Tape Specifications ("D" Taping Orientation) (Black Package, No Suffix)



QT Carrier Tape Specifications ("D" Taping Orientation) (White Package, -M Suffix)



GENERAL PURPOSE 6-PIN PHOTOTRANSISTOR OPTOCOUPLERS

4N25	**4N26**	**4N27**	**4N28**	**4N35**	**4N36**
4N37	**H11A1**	**H11A2**	**H11A3**	**H11A4**	**H11A5**

4N28-M

6-Pin White Package Phototransistor 6-PIN, DIP

Contents

Datasheet

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General description

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode a silicon phototransistor in a 6-Pin dual-in-line package.

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N28FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N28TV-M	Full Production	$0.132	N/A	N/A	RAIL
4N28FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N28SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N28-M	Full Production	$0.132	N/A	N/A	RAIL
4N28F-M	Full Production	$0.149	N/A	N/A	RAIL
4N28V-M	Full Production	$0.132	N/A	N/A	RAIL
4N28T-M	Full Production	$0.132	DIP	6	RAIL
4N28FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N28SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N28S-M	Full Production	$0.132	DIP	6	RAIL
4N28SV-M	Full Production	$0.132	DIP	6	RAIL

* 1,000 piece Budgetary Pricing

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Safety agency certificates

Cetificate	Agency	
310983-01 (95 K)	DEMKO	DEMKO Testing & Certification
P01101866 (383 K)	NEMKO	NEMKO
CR/0117 (424 K)	BABT	British Approvals Board of Telecommunications
102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
0134082 (136 K)	SEMKO	SEMKO
FI 17434 (47 K)	FIMKO	FIMKO
E90700, Vol. 2 (254 K)	UL	Underwriters Laboratories Inc.

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4N26-M

6-Pin White Package Phototransistor 6-PIN, DIP

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General description

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode a silicon phototransistor in a 6-Pin dual-in-line package.

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N26FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N26-M	Full Production	$0.132	N/A	N/A	RAIL
4N26FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N26SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N26V-M	Full Production	$0.132	N/A	N/A	RAIL
4N26SV-M	Full Production	$0.141	DIP	6	RAIL
4N26FV-M	Full Production	$0.176	N/A	N/A	RAIL
4N26T-M	Full Production	$0.132	DIP	6	RAIL
4N26TV-M	Full Production	$0.141	N/A	N/A	RAIL
4N26S-M	Full Production	$0.132	DIP	6	RAIL
4N26F-M	Full Production	$0.149	N/A	N/A	RAIL
4N26SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL

* 1,000 piece Budgetary Pricing

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310983-01 (95 K)	DEMKO	DEMKO Testing & Certification
P01101866 (383 K)	NEMKO	NEMKO
CR/0117 (424 K)	BABT	British Approvals Board of Telecommunications
102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
0134082 (136 K)	SEMKO	SEMKO
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6-Pin White Package Phototransistor 6-PIN, DIP

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General description

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N27SV-M	Full Production	$0.132	DIP	6	RAIL
4N27FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N27SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N27SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N27S-M	Full Production	$0.132	DIP	6	RAIL
4N27TV-M	Full Production	$0.132	N/A	N/A	RAIL
4N27-M	Full Production	$0.132	N/A	N/A	RAIL
4N27F-M	Full Production	$0.149	N/A	N/A	RAIL
4N27T-M	Full Production	$0.132	DIP	6	RAIL
4N27FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N27FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N27V-M	Full Production	$0.132	N/A	N/A	RAIL

* 1,000 piece Budgetary Pricing

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310983-01 (95 K)	DEMKO	DEMKO Testing & Certification
P01101866 (383 K)	NEMKO	NEMKO
CR/0117 (424 K)	BABT	British Approvals Board of Telecommunications
102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
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4N25-M

6-Pin White Package Phototransistor 6-PIN, DIP

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General description

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode a silicon phototransistor in a 6-Pin dual-in-line package.

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N25FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N25FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N25F-M	Full Production	$0.149	N/A	N/A	RAIL
4N25TV-M	Full Production	$0.132	N/A	N/A	RAIL
4N25SV-M	Full Production	$0.132	DIP	6	RAIL
4N25T-M	Full Production	$0.132	DIP	6	RAIL
4N25FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N25-M	Full Production	$0.132	N/A	N/A	RAIL
4N25V-M	Full Production	$0.132	N/A	N/A	RAIL
4N25SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N25S-M	Full Production	$0.132	DIP	6	RAIL
4N25SR2-M	Full Production	$0.141	DIP	6	TAPE REEL

* 1,000 piece Budgetary Pricing

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CR/0117 (424 K)	BABT	British Approvals Board of Telecommunications
102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
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4N35-M
6-Pin White Package Phototransistor 6-PIN, DIP

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General description

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N35FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N35SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N35SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N35T-M	Full Production	$0.132	DIP	6	RAIL
4N35F-M	Full Production	$0.149	N/A	N/A	RAIL
4N35SV-M	Full Production	$0.132	DIP	6	RAIL
4N35FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N35V-M	Full Production	$0.132	N/A	N/A	RAIL
4N35S-M	Full Production	$0.132	DIP	6	RAIL
4N35FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N35TV-M	Full Production	$0.132	DIP	6	RAIL
4N35-M	Full Production	$0.132	N/A	N/A	RAIL

* 1,000 piece Budgetary Pricing

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P01101866 (383 K)	NEMKO	NEMKO
CR/0117 (424 K)	BABT	British Approvals Board of Telecommunications
102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
0134082 (136 K)	SEMKO	SEMKO
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4N36-M
6-Pin White Package Phototransistor 6-PIN, DIP

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General description

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode a silicon phototransistor in a 6-Pin dual-in-line package.

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N36SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N36V-M	Full Production	$0.132	N/A	N/A	RAIL
4N36T-M	Full Production	$0.132	DIP	6	RAIL
4N36TV-M	Full Production	$0.132	N/A	N/A	RAIL
4N36FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N36FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N36SV-M	Full Production	$0.132	DIP	6	RAIL
4N36FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N36-M	Full Production	$0.132	N/A	N/A	RAIL
4N36F-M	Full Production	$0.149	N/A	N/A	RAIL
4N36SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N36S-M	Full Production	$0.132	DIP	6	RAIL

* 1,000 piece Budgetary Pricing

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P01101866 (383 K)	NEMKO	NEMKO
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102497 (1629 K)	VDE	VDE Pruf-und Zertifizierungsinstitut
1113639 (111 K)	CSA	Canadian Standards Association
0134082 (136 K)	SEMKO	SEMKO
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4N37-M

6-Pin White Package Phototransistor 6-PIN, DIP

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General description

The general purpose optocouplers consist of a gallium arsenide infrared emitting diode a silicon phototransistor in a 6-Pin dual-in-line package.

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Features

- Underwriters Laboratory (UL) recognized - File #E90700
- VDE recognized - File #94766

- Add option V for white package (e.g. 4N25V-M)
- Add option 300 for black package (e.g. 4N25.300)

- Also available in white package by specified - M suffix, e.g. 4N25-M except H11A2, H11A4 and H11A5

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Applications

- Power supply regulators
- Digital logic inputs
- Microprocessor inputs

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Ordering information

The following options can be ordered with this part:

Option	Order Entry Identifier	Description
300	.300	VDE 0884
3S	.3S	Option S (see below); VDE 0884
3SD	.3SD	Option S (see below); VDE 0884; Tape and Reel
R2	.R2	Opto Plus 2 Reliability Conditioning
S	.S	Surface-Mount Lead Bend
SD	.SD	Option S; Tape and Reel
W	.W	10 mm Lead Bend

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
4N37V-M	Full Production	$0.132	N/A	N/A	RAIL
4N37S-M	Full Production	$0.132	DIP	6	RAIL
4N37SR2V-M	Full Production	$0.141	DIP	6	TAPE REEL
4N37TV-M	Full Production	$0.132	N/A	N/A	RAIL
4N37F-M	Full Production	$0.149	N/A	N/A	RAIL
4N37SV-M	Full Production	$0.132	DIP	6	RAIL
4N37FR2V-M	Full Production	$0.159	DIP	6	TAPE REEL
4N37FR2-M	Full Production	$0.159	DIP	6	TAPE REEL
4N37SR2-M	Full Production	$0.141	DIP	6	TAPE REEL
4N37T-M	Full Production	$0.132	N/A	N/A	RAIL
4N37FV-M	Full Production	$0.149	N/A	N/A	RAIL
4N37-M	Full Production	$0.132	N/A	N/A	RAIL

* 1,000 piece Budgetary Pricing

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