Short Form Catalog 2013

Light Emitting Diodes

Featuring

Ultra Bright LED Lamps in:

• Red: to 11,000 mcd typical

• Orange-Amber: to 11,750 mcd typical

Yellow: to 9,750 mcd typical

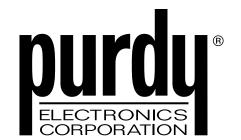
• Green: to 5,000 mcd typical

• White: to 10,000 mcd typical

Blue: to 1,500 mcd typical

T-3, T-1 3/4, T-1
Surface Mount Packages
Dual Color
Special Packages

Contact us for Segment Displays



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LED_SFC_1211



Red LED Lamps

Part Number	LED Color	Lens Color	λ Peak (nm)	Luminous Int Min.	ensity I _v (mcd) Typ.	(I _F -mA)	Total Angle (degree)	Material
T-3 Package (10 mm)								
AND190CRP	Red	Clear	660	6,000	11,000	20	8	GaAlAs
AND191CRP	Red	White Diffused	660	180	600	20	20	GaAlAs
AND190HRP	Red	Clear	644	5,600	10,000	20	8	InGaAIP
T-1 3/4 Package (5 mm)								
AND113R	Red	Red, Clear	700	5	18	10	30	GaP
AND113RP	Red	Red, Clear	700	5	18	10	30	GaP
AND114R	Red	Red, Diffused	700	2	5	10	60	GaP
AND114RP	Red	Red Diffused	700	2	5	10	60	GaP
AND180CRP	Red	Clear	660	2,000	3,600	20	10	GaAlAs
AND130CR	Red	Clear	660	1,200	2,000	20	16	GaAlAs
AND120CRP	Red	Clear	660	1,200	2,000	20	22	GaAlAs
AND120CR	Red	Clear	660	1,200	2,000	20	22	GaAlAs
AND155CRP	Red	Clear	660	630	1,250	20	20	GaAlAs
AND120BR	Red	Clear	660	500	1,100	20	35	GaAlAs
AND134CRP	Red	Red Diffused	660	360	600	20	40	GaAlAs
AND116CR	Red	Milky Diffused	660	56	130	20	60	GaAlAs
AND180HRP	Red	Clear	644	1,800	6,000	20	8	InGaAIP
AND157HRP	Red	Clear	644	700	1,800	20	20	InGaAIP
AND113S	Red	Red,Clear	625	50	150	10	30	GaAsP
AND114S	Red	Red Diffused	625	20	50	10	60	GaAsP
AND114SP	Red	Red Diffused	625	20	50	10	60	GaAsP
AND180HSP	Red	Clear	623	3.200	6,000	20	8	InGaAIP
AND157HSP	Red	Clear	632	4.500	5,650	20	30	InGaAIP
T-1 Package (3 mm)								
AND123R	Red	Red, Clear	700	5	12	10	50	GaP
AND124R	Red	Red, Diffused	700	1.3	3.0	10	60	GaP
AND125CRP	Red	Clear	660	360	600	20	36	GaAlAs
AND126CR	Red	Milky Diffused	660	75	180	20	65	GaAlAs
ANDHS	Red	Clear	632	400	630	20	10	InGaAIP
Surface Mount Package: F (3.0 x 1.0 x 2.0 mm)	lat Lens (2.0 x 1.2	5 x 1.1 mm); Flat Le	ens LP (1.6 x 0.80 x	(0.40 mm); Domed	Lens (3.2 x 2.4 x 2.5	5 mm); TOP LED	(3.5 x 2.8 x 1.9 mm); Rt Angle Lens
AND4RA (Flat)	Red	Clear	660	20	40	20	140	GaAlAs
AND4RRA (Rt Angle)	Red	Clear	632	90	139	20	120	InGaAIP
AND4SA (Flat)	Red	Clear	640	1.53	5.0	20	140	GaAsP
AND5RA (Domed)	Red	Clear	660	290	480	20	30	GaAlAs
AND5SA (Domed)	Red	Clear	640	24	40	20	30	GaAsP
AND6RA (TOP LED)	Red	Clear	624	1,120	1,500	70	120	AlGaInP
AND7RA (Flat LP)	Red	Clear	624	90	135	20	120	InGaAIP
Orange-Ambe	r LED Lan	nps						
T-3 Package (10 mm)		T 2	0/2	4.500				
AND190HAP	Amber	Clear	612	4.500	8,000	20	6	InGaAIP
AND190HOP	Orange	Clear	620	4,000	6,000	20	6	InGaAIP
T-1 3/4 Package (5 mm)		T 0'	0/0	4.000	0.000	0.2	- 00	1.0.415
AND157HAP	Amber	Clear	612	1.200	2,000	20	20	InGaAIP
AND185HOP	Orange	Clear	620	9,000	11,750	20	6	InGaAIP
AND185HAP	Amber	Clear	612	8,500	11,150	20	6	InGaAIP
AND156HOP	Orange	Clear	620	630	800	20	25	InGaAIP
T-1 Package (3 mm)		T 0'	000	050	400	0.2	10 1	1.0.1:5
AND262HOP	Orange	Clear	620	250	420	20	40	InGaAIP
AND262HAP	Amber	Clear	612	240	390	20	40	InGaAIP
Surface Mount Package: F								
AND4OA (Flat)	Orange	Clear	620	27	60	20	140	InGaAIP

Notes

Flat Lens 3,000 pcs/reel; Domed Lens 1,000 pcs/reel; Right Angle & TOP LED 2,000 pcs/reel

2) T-1 and T1 3/4 LEDs can be supplied in Tape & Reel with a minimum order and shipment of 10K pcs of each part:

T-1 part 2,000 pcs/reel; T-1 3/4 type 1,000 pcs/reel

¹⁾ Surface Mount Devices are supplied in Tape & Reel packaging in the following manner:



Yellow	LED	Lam	ps
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Part Number	LED Color	Lens Color	λ Peak (nm)	Luminous Int Min.	tensity I _v (mcd) Typ.	(I _F -mA)	Total Angle (degree)	Material
T-3 Package (10 mm)					7.		, , , ,	
AND190HYP	Yellow	Clear	590	4,500	6,300	20	6	InGaAIP
T-1 3/4 Package (5 mm)			•	,	•			
AND180HYP	Yellow	Clear	590	6,000	9,750	20	6	InGaAIP
ANDS4E38XX16	Yellow	Clear	590	2,500	3,200	20	16	InGaAIP
ANDS4E38XX20	Yellow	Clear	590	2,000	3,000	20	20	InGaAIP
AND170AYP	Yellow	Clear	590	1,600	2,500	20	6	InGaAIP
AND157HYP	Yellow	Clear	590	1,200	2,500	20	15	InGaAIP
AND156EYP	Yellow	Clear	590	300	700	20	50	InGaAIP
AND156QYP	Yellow	Clear	590	3,600	4,000	20	30	InGaAIP
AND156SYP	Yellow	Clear	590	4,500	6,200	20	30	InGaAIP
AND181YP	Yellow	Yellow, Clear	590	37	75	10	15	GaAsP
AND113Y	Yellow	Yellow, Clear	590	20	50	10	30	GaAsP
AND113YP	Yellow	Yellow, Clear	590	20	50	10	30	GaAsP
AND114Y	Yellow	Yellow, Diffused	590	5	18	10	60	GaAsP
AND114YP	Yellow	Yellow, Diffused	590	5	18	10	60	GaAsP
Γ-1 Package (3 mm)				`			, •• 1	
AND123R	Yellow	Clear	595	72	120	20	36	InGaAIP
AND124R	Yellow	Yellow, Clear	590	10	45	10	50	GaAsP
AND125CRP	Yellow	Yellow, Diffused	590	8	20	10	60	GaAsP
Surface Mount Package: F								
3.0 x 1.0 x 2.0 mm)	101 LC115 (2.0 X 1.2	0 x 1.1 111111), 1 lat 20	110 E1 (1.0 x 0.00 x	0.40 11111), Doille	2 EC115 (0.E X 2.4 X 2.	J,, 101 LLL	(0.0 X 2.0 X 1.0 IIIII	i, itt Aligie Len
AND4RA (Flat)	Yellow	Clear	590	58	80	20	140	InGaAIP
AND4RRA (Rt Angle)	Yellow	Clear	590	395	625	20	30	InGaAIP
AND4SA (Flat)	Yellow	Clear	589	90	135	20	120	InGaAIP
Green LED La	mps							
Green LED La T-3 Package (10 mm) AND190HGP	mps Green	Clear	574	1,200	2,000	20	8	InGaAIP
Γ-3 Package (10 mm)	•	Clear Clear	574 567	1,200 370	2,000	20 20	8 8	InGaAIP GaP
F-3 Package (10 mm) AND190HGP AND190GCP	Green	+					:	
F-3 Package (10 mm) AND190HGP AND190GCP	Green	+					:	
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm)	Green Green	Clear	567	370	700	20	8	GaP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG	Green Green	Clear	567 505	370 1,250	700	20	12	GaP InGaN
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG	Green Green Green Green	Clear Clear Clear	567 505 525	370 1,250 2,500	700 2,200 5,000	20 20 20	12 20	GaP InGaN InGaN
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP	Green Green Green Green Green	Clear Clear Clear Clear	567 505 525 567	370 1,250 2,500 350	700 2,200 5,000 780 500 50	20 20 20 20	12 20 20	GaP InGaN InGaN GaP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP	Green Green Green Green Green Green	Clear Clear Clear Clear Clear Clear	567 505 525 567 567	370 1,250 2,500 350 300	700 2,200 5,000 780 500	20 20 20 20 20 20	12 20 20 20 25	GaP InGaN InGaN GaP GaP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G	Green Green Green Green Green Green Green Green Green	Clear Clear Clear Clear Clear Clear Green, Clear	567 505 525 567 567 565	370 1,250 2,500 350 300 20	700 2,200 5,000 780 500 50	20 20 20 20 20 20 10	12 20 20 20 25 30	InGaN InGaN GaP GaP GaP
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear	567 505 525 567 567 565 565 573 565	370 1,250 2,500 350 300 20 20 630 5	700 2,200 5,000 780 500 50 1,250 18	20 20 20 20 20 10 10 20 10	8 12 20 20 25 30 30 20 60	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114G	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Clear	567 505 525 567 567 565 565 573	370 1,250 2,500 350 300 20 20 630	700 2,200 5,000 780 500 50 50 1,250	20 20 20 20 20 20 10 10	8 12 20 20 25 30 30 20	InGaN InGaN GaP GaP GaP GaP InGaAIP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP I-1 Package (3 mm)	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Clear Green, Diffused	567 505 525 567 567 565 565 573 565 565 565	370 1,250 2,500 350 300 20 20 630 5	700 2,200 5,000 780 500 50 1,250 18 18	20 20 20 20 20 10 10 20 10	8 12 20 20 25 30 30 20 60	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP I-1 Package (3 mm) AND160NG	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear	567 505 525 567 567 565 565 573 565 565 570	370 1,250 2,500 350 300 20 20 630 5 5	700 2,200 5,000 780 500 50 1,250 18 18	20 20 20 20 20 10 10 10 20 10	8 12 20 20 25 30 30 20 60 60	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GAP GAP GAP GAP GAP GAP
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND135PGP AND113G AND113G AND113GP AND157HGP AND114G AND114G AND114GP I-1 Package (3 mm) AND160NG AND262GCP	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Clear Green, Diffused Green, Diffused	567 505 525 567 567 565 565 573 565 565 570 567	370 1,250 2,500 350 300 20 20 630 5 5 200 70	700 2,200 5,000 780 500 50 1,250 18 18 250 110	20 20 20 20 20 10 10 10 20 10 10	8 12 20 20 25 30 30 20 60 60 15 36	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP
T-3 Package (10 mm) AND190HGP AND190GCP T-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND157HGP AND114G AND114GP T-1 Package (3 mm) AND160NG AND262HG	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear	567 505 525 567 567 565 565 573 565 565 570 567 525	370 1,250 2,500 350 300 20 20 630 5 5	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000	20 20 20 20 20 10 10 20 10 10 20 20 20 20	8 12 20 20 25 30 30 20 60 60	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GAP GAP GAP GAP GAP GAP
T-3 Package (10 mm) AND190HGP AND190GCP T-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND157HGP AND114G AND114GP T-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear Clear Clear Green, Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565	370 1,250 2,500 350 300 20 20 630 5 5 200 70 630 20	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000 50	20 20 20 20 20 10 10 20 10 10 20 20 20 10	8 12 20 20 25 30 30 20 60 60 15 36 35 50	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP
T-3 Package (10 mm) AND190HGP AND190GCP T-1 3/4 Package (5 mm) AND412HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP T-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND123G AND124G	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Diffused	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565	370 1,250 2,500 350 300 20 20 630 5 5 200 70 630 20 8	700 2,200 5,000 780 500 50 1,250 18 18 18 250 110 1,000 50 20	20 20 20 20 20 10 10 20 10 10 20 20 20 10 10	8 12 20 20 25 30 30 20 60 60 15 36 35 50 60	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP F-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm)	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Diffused	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 sns LP (1.6 x 0.80 x	370 1,250 2,500 350 300 20 20 630 5 5 200 70 630 20 8	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000 50 20 Lens (3.2 x 2.4 x	20 20 20 20 10 10 10 20 10 10 20 20 20 20 10 10 10	8 12 20 20 25 30 30 20 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	GaP InGaN InGaN GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP G
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F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP F-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm)	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Diffused	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 sns LP (1.6 x 0.80 x	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 s 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000 50 20 Lens (3.2 x 2.4 x	20 20 20 20 10 10 10 20 10 10 20 20 20 20 10 10 10	8 12 20 20 25 30 30 20 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	InGaN InGaN InGaN GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
I-3 Package (10 mm) AND190HGP AND190GCP I-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114G AND114GP I-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm) AND4GA (Flat)	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Diffused Clear Clear Clear Clear Clear Clear Green, Diffused Tolear Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 sns LP (1.6 x 0.80 x	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 a 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 18 250 110 1,000 50 20 1 Lens (3.2 x 2.4 x	20 20 20 20 20 10 10 20 10 10 20 20 20 20 10 10 20 20 20 20 10 10 20 10 10 20 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 20 60 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
T-3 Package (10 mm) AND190HGP AND190GCP T-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP T-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F (3.0 x 1.0 x 2.0 mm) AND4GA (Flat) AND4GRAA (Domed)	Green	Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Green, Clear Green, Diffused Clear Clear Clear Clear Green, Diffused	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 s65 570 540	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 x 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000 50 20 Lens (3.2 x 2.4 x 2.4) 15 140	20 20 20 20 20 10 10 10 20 20 20 20 10 10 20 20 20 20 20 20 20 20 10 10 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 20 60 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	InGaN InGaN InGaN GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
T-3 Package (10 mm) AND190HGP AND190GCP T-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP T-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F (3.0 x 1.0 x 2.0 mm) AND4GA (Flat) AND4GAA (Flat) AND4PGA (Flat)	Green	Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Green, Diffused Clear Clear Clear Green, Diffused Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 s65 570 540 555	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 a 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 18 250 110 1,000 50 20 1 Lens (3.2 x 2.4 x	20 20 20 20 20 10 10 10 20 20 20 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 20 60 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	InGaN InGaN InGaN GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114G AND114GP F-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm) AND4GA (Flat) AND4GAA (Domed) AND4GA (Flat) AND4GA (Flat) AND4GA (Flat) AND4GA (Flat)	Green	Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Green, Clear Clear Green, Diffused Clear Clear Clear Green, Diffused Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 s65 77 525 565 565 570 540 555 570	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 x 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 18 250 110 1,000 50 20 1 Lens (3.2 x 2.4 x 2.5 x 2.4 x 2.5 x 2.4 x 2.5 x 2.4 x 2.5 x	20 20 20 20 20 10 10 10 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 30 20 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm	InGaN InGaN InGaN GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP F-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm) AND4GA (Flat) AND4GA (Flat) AND4PGA (Flat) AND5GA (Domed) AND5GA (Domed) AND5GA (Domed)	Green	Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Green, Diffused Clear Clear Clear Green, Diffused Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 565 s65 570 540 555 570 570 570	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 x 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 250 110 1,000 50 20 4 Lens (3.2 x 2.4	20 20 20 20 20 10 10 10 20 20 20 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 20 60 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm 140 120 140 30 30	InGaN InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga
F-3 Package (10 mm) AND190HGP AND190GCP F-1 3/4 Package (5 mm) AND412HG AND520HG AND520HG AND240GCP AND135PGP AND113G AND113GP AND157HGP AND114G AND114GP F-1 Package (3 mm) AND160NG AND262GCP AND262HG AND123G AND124G Surface Mount Package: F 3.0 x 1.0 x 2.0 mm) AND4GA (Flat) AND4GA (Flat) AND4GA (Flat) AND4GA (Flat) AND4GA (Flat) AND5GA (Domed) AND5GA (Domed) AND5GA (Domed)	Green	Clear Clear Clear Clear Clear Clear Clear Green, Clear Green, Clear Green, Diffused Green, Diffused Clear Clear Clear Clear Clear Clear Green, Diffused 5 x 1.1 mm); Flat Le Clear	567 505 525 567 567 565 565 573 565 565 570 567 525 565 565 sns LP (1.6 x 0.80 x 570 540 555 570 570 555	370 1,250 2,500 350 300 20 20 630 5 5 5 200 70 630 20 8 a 0.40 mm); Domeo	700 2,200 5,000 780 500 50 1,250 18 18 18 250 110 1,000 50 20 1 Lens (3.2 x 2.4 x	20 20 20 20 20 10 10 10 20 20 20 20 10 10 20 20 20 20 20 20 20 20 20 2	8 12 20 20 25 30 30 30 20 60 60 15 36 35 50 60 0 (3.5 x 2.8 x 1.9 mm 140 120 140 30 30 30 30	InGaN InGaN InGaN GaP GaP GaP GaP InGaAIP GaP GaP GaP GaP GaP GaP GaP GaP GaP Ga



Blue LED Lan	nps							
Part Number	LED Color	Lens Color	λ Peak (nm)	Luminous Int Min.	ensity I _v (mcd) Typ.	(I _F -mA)	Total Angle (degree)	Material
T-3 Package (10 mm)								
AND190HBA	Blue	Clear	430	1,000	1,500	20	10	GaN
AND190HBB	Blue	Clear	470	630	1,250	20	15	InGaN
T-1 3/4 Package (5 mm)	,	,				•		
AND410HB	Blue	Clear	430	250	400	20	10	GaN
AND520HB	Blue	Clear	475	630	900	20	20	InGaN
T-1 Package (3 mm)	T	1 0				1		
AND262HBA	Blue	Clear	430	160	250	20	40	GaN
AND262HBB	Blue	Clear	470	150	300	20	45	InGaN
Surface Mount Package: I	Flat Lens (2.0 x 1.25	x 1.1 mm); Flat Le	ens LP (1.6 x 0.80)	k 0.40 mm); Domed	I Lens (3.2 x 2.4 x 2.	5 mm); TOP LED) (3.5 x 2.8 x 1.9 mr	n); Rt Angle Lens
(3.0 x 1.0 x 2.0 mm)	Dive	Class	420	10	I 00	1 00	140	O-N
AND4BA (Flat)	Blue	Clear	430 468	16	20	20	140 140	GaN
AND4BA (Flat)	Blue	Clear		30 17	50 22	20		InGaN
AND4BRA (Rt Angle)	Blue	Clear	430			20	120	GaN
AND4BRB (Rt Angle)	Blue	Clear	470	23	29	20	120	InGaN
AND5BA (Domed)	Blue	Clear	430 470	90	112	20 20	30	GaN
ANDSBA (TOP LED)	Blue Blue	Clear	470	118 35	150 55	20	30 120	InGaN
AND6BA (TOP LED)		Clear	430	57	85	20	-	GaN
AND6BC (TOP LED)	Blue Blue	Clear	468	90	135	20	120 120	InGaN InGaN
AND6BD (TOP LED) AND7BA (Flat LP)	Blue	Clear Clear	468 470	90 18	30	5	120	InGaN
		Clear	470	10] 30	<u> </u>	120	IIIGan
White LED La	mps							
T-3 Package (10 mm)								
AND190HW	White	Clear	420-700	3,600	5,000	25	10	InGaN
T-1 3/4 Package (5 mm)								
AND420HWA	White	Clear	420-700	2,500	3,500	20	15	InGaN
AND420HWB	White	Clear	420-700	7.150	10,000	20	20	InGaN
AND520HW	White	Clear	420-700	2,850	4,000	20	25	InGaN
AND720HW	White	Clear	420-700	7.150	9,000	20	20	InGaN
T-1 Package (3 mm)	1 140.00	1 0	400 -00	4 000	1 00-0	1 00	1 0-	
AND262HW	White	Clear	420-700	1,800	2,250	20	35	InGaN
Surface Mount Package:	Flat Lens (2.0 x 1.25	x 1.1 mm); Flat Le	ense (2.0 x 1.25 x 1	.1 mm); Domed Le	ens (3.2 x 2.4 x 2.5 m	im); TOP LED (3.	.5 x 2.8 x 1.9 mm);	Rt Angle Lens (3.0
x 1.0 x 2.0 mm)	White	Clear	420-700	100	160	20	I 100	In Co N
AND4WA (TOP LED)	White	Clear	420-700	90	160 182	20	120 150	InGaN
AND4WB (Flat) AND7WA (Flat LP)	White	Clear Clear	420-700	28.5	45	5	130	InGaN InGaN
		Cleal	420-700	20.3	1 45] 3	130	IIIGain
Dual Color LE				•				
AND-2451RGL	Red/Green	Milky, Diffused	700/567	0.7/0.8	1.2/2.7	10	120	GaAsP/GaP
AND126SG	Red/Green	Milky, Diffused	635/565	12/12	14/14	10	60	GaAsP/GaP
AND116SG	Red/Green	Milky, Diffused	635/565	10/10	12/12	10	70	GaAsP/GaP
AND208SGA AND208YGA	Red/Green	Milky, Diffused	625/565	8.0/8.0	14.0/14.0	10	110	GaAsP/GaP
	Yellow/Green	Milky, Diffused	590/565	3.2/8.0	6.0/14.0	10	110	GaAsP/GaP
Special Shape								
AND205RA	Red	Red, Diffused	700	0.5	1.0	10	1 x 5	GaP
AND208RA	Red	Red, Diffused	700	0.5	1.0	10	2 x 5	GaP
AND211RA	Red	Red, Diffused	700	0.5	1.0	10	2 x 4	GaP
AND218RPA	Red	Red, Diffused	700	0.5	1.0	10	2 x 5	GaP
AND226R	Red	Red, Diffused	700	0.5	1.0	10	Flat	GaP
AND233CRP	Red	CLear	660	320	800	20	15	GaAlAs
AND205YA	Yellow	Yellow, Diffused	590	2.0	4.0	10	1 x 5	GaAsP
AND211YA	Yellow	Yellow, Diffused	590	2.0	4.0	10	2 x 4	GaAsP
AND218YPA	Yellow	Yellow, Diffused	590	2.0	4.0	10	2 x 5	GaAsP
AND226Y	Yellow	Yellow, Diffused	590	2.0	4.0	10	Flat	GaAsP
AND208YA	Yellow	Yellow, Diffused	590	2.0	3.5	10	2 x 5	GaAsP
AND233GCP	Green	Green, Diffused	567	60	150	20	25	GaP
AND205GA	Green	Green, Diffused	565	2.0	4.0	10	1 x 5	GaP
AND211GA	Green	Green, Diffused	565	2.0	4.0	10	2 x 4	GaP
AND218GPA	Green	Green, Diffused	565	2.0	4.0	10	2 x 5	GaP
AND226G	Green	Green, Diffused	565	2.0	4.0	10	Flat	GaP
AND208GA	Green	Green, Diffused	565	2.0	3.5	10	2 x 5	GaP



Red and Green LED Segment Lamps

Part Number	LED Color	Face Color	Display Height (inch)	Characteristics	Luminous Intensity I _v (mcd) Typ.	(I _F -mA)	Polarity	Material
7 Segments	•	!	•					
AND2307SAL	Red	Red	2.30	RHDP, 10 pin	7.5	10	C-A	GaAsP
AND2307SCL	Red	Red	2.30	RHDP, 10 pin	7.5	10	C-C	GaAsP
AND1510SAL	Red	Red	1.50	RHDP, 10 pin	4.6	10	C-A	GaAsP
AND1510SCL	Red	Red	1.50	RHDP, 10 pin	4.6	10	C-C	GaAsP
AND4310SAL	Red	Red	0.43	RHDP & LHDP, 14 pin	3.3	10	C-A	GaAsP
AND4310SCL	Red	Red	0.43	RHDP & LHDP, 14 pin	3.3	10	C-C	GaAsP
AND5610SAL	Red	Red	0.56	RHDP, 10 pin	3.3	10	C-A	GaAsP
AND5610SCL	Red	Red	0.56	RHDP, 10 pin	3.3	10	C-C	GaAsP
AND8010SAL	Red	Red	0.80	RHDP, 16 pin	3.8	10	C-C	GaAsP/GaP
AND8010SCL	Red	Red	0.80	RHDP, 16 pin	3.8	10	C-C	GaAsP/GaP
16 Segments					•			
AND5420OALB	Red	Red	0.54	RHDP, 18 pin	3.3	10	C-A	GaAsP
AND5420OCLB	Red	Red	0.54	RHDP, 18 pin	3.3	10	C-C	GaAsP
AND8010SALB	Red	Red	0.80	RHDP, 18 pin	3.8	10	C-C	GaAsP/GaP
AND8010SCLB	Red	Red	0.80	RHDP, 18 pin	3.8	10	C-C	GaAsP/GaP
7 Segments							•	
AND2307GAL	Green	Gray	2.30	RHDP, 10 pin	6.5	10	C-A	GaP
AND2307GCL	Green	Gray	2.30	RHDP, 10 pin	6.5	10	C-C	GaP
AND8010GAL	Green	Gray	0.80	RHDP & LHDP 16 pin	3.3	10	C-A	GaP
AND8010GCL	Green	Gray	0.80	RHDP & LHDP 16 pin	3.3	10	C-C	GaP
AND4310GAL	Green	Gray	0.43	RHDP & LHDP 14 pin	2.9	10	C-A	GaP