



2024







**Automotive
Warning Light LED
series**



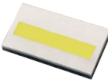
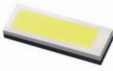
- Pro-CSP-GR1 series provides good value choice.

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	4	PBVP-4FWE-F1GR	<input type="checkbox"/> White	1000	3.2	330	400	5620 K 5880 K 6150 K 6450 K	120°
	7	PBVH-7FWE-F2GR	<input type="checkbox"/> White	1000	6.5	660	800	5620 K 5880 K 6150 K 6450 K	120°
	10	PBVJ-10FWE-F3GR	<input type="checkbox"/> White	1000	9.7	990	1170	5620 K 5880 K 6150 K 6450 K	120°
	14	PBVK-14FWE-F4GR	<input type="checkbox"/> White	1000	12.9	1320	1560	5620 K 5880 K 6150 K 6450 K	120°
	17	PBVL-17FWE-F5GR	<input type="checkbox"/> White	1000	16.2	1650	1950	5620 K 5880 K 6150 K 6450 K	120°



- Pro-CSP-GR series is continuous padding design to deliver higher lumens.

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	7	PBVH-7FWE-F2GR1	<input type="checkbox"/> White	1000	6.5	700	800	5620 K 5880 K 6150 K 6450 K	120°
	10	PBVJ-10FWE-F3GR1	<input type="checkbox"/> White	1000	9.7	1060	1170	5620 K 5880 K 6150 K 6450 K	120°
	14	PBVK-14FWE-F4GR1	<input type="checkbox"/> White	1000	12.9	1400	1560	5620 K 5880 K 6150 K 6450 K	120°
	17	PBVL-17FWE-F5GR1	<input type="checkbox"/> White	1000	16.2	1700	1950	5620 K 5880 K 6150 K 6450 K	120°

- Brand-new continuous padding LED delivers excellent light uniformity without dark area, and higher lumens (approx. 10% increase) than conventional version.

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	10	PBVC-10FWE-F3G1	<input type="checkbox"/> White	1000	9.7	1000	1150	5620 K 5880 K 6150 K 6450 K	120°
	14	PBVD-14FWE-F4G1	<input type="checkbox"/> White	1000	12.9	1350	1520	5620 K 5880 K 6150 K 6450 K	120°
	17	PBVE-17FWE-F5G1	<input type="checkbox"/> White	1000	16.2	1650	1880	5620 K 5880 K 6150 K 6450 K	120°
	12	PBSC-12FWE-H3G	<input type="checkbox"/> White	1000	9.7	1250	1300	5620 K 5880 K 6150 K 6450 K	120°

- Dual-color design headlights can switch between white and yellow light in sunny and rainy conditions, providing better nighttime visibility.

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	20	PBVG-20FQE-F6GYGWA	<input type="checkbox"/> White	1000	10	950	1050	5620 K-6450 K	120°
			<input type="checkbox"/> Golden Yellow	1000	10	1030	1150	573 nm	
	4	PQ4A-4FQE-WAG	<input type="checkbox"/> White	1000	3.2	300	350	6500 K	120°
			<input type="checkbox"/> PC Amber	1000	3.2	170	200	589.7 nm	

- Pro-CSP adopts the evolutionary new phosphor film technology which provide better light uniformity and reliability. All series passed AEC-Q102 test.

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	7	PBVB-7FWU-F2G	□ White	1000	6.5	600	700	5620 K 5880 K 6150 K 6450 K	120°
	10	PBVC-10FWU-F3G	□ White	1000	9.7	900	1100	5620 K 5880 K 6150 K 6450 K	120°
	14	PBVD-14FWU-F4G	□ White	1000	12.9	1100	1400	5620 K 5880 K 6150 K 6450 K	120°
	17	PBVE-17FWU-F5G	□ White	1000	16.2	1400	1650	5620 K 5880 K 6150 K 6450 K	120°
	31	PBVF-31FWU-F9G	□ White	1000	30.1	2750	3200	5620 K 5880 K 6150 K 6450 K	120°

	Watt	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
	4	PBVA-4FWE-F1G	□ White	1000	3.2	310	350	5620 K 5880 K 6150 K 6450 K	120°
	7	PBVB-7FWE-F2G	□ White	1000	6.5	600	700	5620 K 5880 K 6150 K 6450 K	120°
	10	PBVC-10FWE-F3G	□ White	1000	9.7	900	1100	5620 K 5880 K 6150 K 6450 K	120°
	14	PBVD-14FWE-F4G	□ White	1000	12.9	1100	1400	5620 K 5880 K 6150 K 6450 K	120°
	17	PBVE-17FWE-F5G	□ White	1000	16.2	1400	1650	5620 K 5880 K 6150 K 6450 K	120°

● Applications: rear light / signal light / braking light / DRL

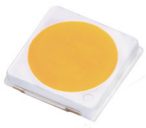
3535 series



size : 3.45 X 3.45 mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
AK2N-WA1HL-2	White	350	3.1	130	135	5500 K	130°
AK2N-PB1HL-A	PC Amber	350	3.1	120	135	589 nm	130°

3030 series

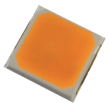


size : 3.0 X 3.0 mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
AJ2N-WA1DF-2	White	150	3.2	55	65	5850 K	120°
AJ2N-PA1DF-A	PC Amber	150	3.2	50	55	589 nm	120°
AJ2N-RA1DF	Red	150	2.2	18.1	20	623 nm	120°
AJ2N-GA1DF	Green	150	3.2	30.6	35	525 nm	120°
AJ2N-BA1DF	Blue	150	3.2	6.3	9.0	465 nm	120°

PJ2N-2FPE-A2	PC Amber	350	3.1	100	125	589 nm	120°
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3030 series



size : 3.2 X 2.95mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
PW2G-FFPE-A	PC Amber	150	3.05	35	44	5850 K	120°
PW2G-1FPE-A2	PC Amber	300	3.05	70	88	589 nm	120°

2016 series

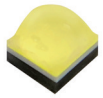


size : 2.0 X 1.6 mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
AV2N-WA1AF-1	White	50	3.2	13.9	20	5850 K	120°
AV2N-AA1AF-A	PC Amber	50	3.2	13.9	15.8	589 nm	120°

● Warning Light LED : various packaging size

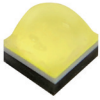
2525 series



size : 2.45X 2.45mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
PV2N-4LWE-WFC	White	350	2.8	155	170	5600 K	130°
PV2N-4LVE-WFC	Warm White	350	2.8	130	145	2900 K	130°
PV2N-4LRE-W	Red	350	2.2	50	70	620.5 nm	130°
PV2N-4LGE-W	Green	350	3.1	90	136	525 K nm	130°
PV2N-4LBE-WFC	Blue	350	3.0	35	49	477.5 nm	130°
PV2N-4LPE-AWFC	PC Amber	350	2.8	90	110	589.7 nm	130°

2020 series



size : 2.0X 2.0mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
PT3N-4LWE-WFC	White	350	3.0	140	160	5600 K	130°
PT3N-4LPE-AWFC	PC Amber	350	3.0	90	105	589.7 nm	130°
PT3N-4LRE-W	Red	350	2.2	50	68	620.5 nm	130°
PT3N-4LGE-W	Green	350	3.1	90	135	525 K nm	130°
PT3N-4LBE-WFC	Blue	350	3.0	35	48	477.5 nm	130°

1717 series



size : 1.7 X 1.7mm

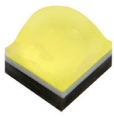
Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
PY2A-3FRE	Red	350	2.2	30	50	620.5 nm	120°
PY2A-3FGE	Green	350	3.0	70	90	525 K nm	120°
PY2B-3FWE-WFC	White	350	3.0	116	140	5600 k	120°
PY2B-3FBE-WFC	Blue	350	3.0	26	41.3	475 nm	120°
PY2B-3FPE-RWFC	PC Red	350	3.0	25.5	38	615 nm	120°
PY2B-3FPE-AWFC	PC Amber	350	3.0	88	115	589.7 nm	120°



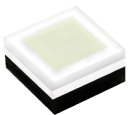
size : 1.7 X 1.7mm

1616 series

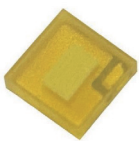
Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
PQ2N-4LWE-WFC	White	350	3.0	140	148	5600 K	130°
PQ2N-4LNE-WFC	Neutral White	350	3.0	140	148	4255K	130°
PQ2N-4LVE-WFCR8	Warm White	350	3.0	110	125	2900 K	130°
PQ2N-4LRE-W	Red	350	2.15	50	67	620.5 nm	130°
PQ2N-4LGE-W	Green	350	3.1	90	133	525 nm	130°
PQ2N-4LME-W	Crimson	350	2.15	335mW	380mW	660 nm	130°
PQ2N-4LBE-WFC	Blue	350	3.0	35	47	477.5 nm	130°
PQ2N-4LDE-WFC	Royal Blue	350	3.1	435 mW	560 mW	455 nm	130°
PQ2N-4LPE-AWFC	PC Amber	350	3.0	80	107	589.7 nm	130°
PQ2A-3FWE-WFCR95	White	350	3.0	90	100	5340K	120°
PQ2A-3FVE-WFCR95	Warm White	350	3.0	80	93	2900K	120°
PQ2A-4FWE-WFC	White	350	3.0	110	125	5600K	120°
PQ2A-4FRE-W	Red	350	2.15	30	52	623 nm	120°
PQ2A-4FGE-W	Green	350	3.1	80	98	525 nm	120°
PQ2A-4FCE-W	Cyan	350	3.1	60	72	505 nm	120°
PQ2A-4FBE-WFC	Blue	350	3.1	23.5	33	475 nm	120°
PQ2A-4FDE-WFC	Royal Blue	350	3.1	435mW	540nW	455 nm	120°
PQ2A-4FME-W	Crimson	350	2.15	275mW	305mW	660 nm	120°
PQ2A-4FPE-AWFC	PC Amber	350	3.0	70	80	589.7 nm	120°
PY2A-SFWE	White	150	3.0	48	56	5850 K	120°
PY2A-SFRE	Red	150	2.2	10	16	626 nm	120°
PY2A-SFBE	Blue	150	3.0	9	12	473 nm	120°
PY2A-SFPE-A	PC Amber	150	3.0	36	45	589.7 nm	120°



size : 1.6X 1.6 mm

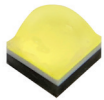


size : 1.6X 1.6 mm



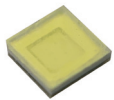
size : 1.65X 1.65 mm

1616+ series



size : 2.0X 2.0mm

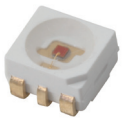
Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
PT2N-4LWE-WFC	White	350	2.8	140	160	5600 K	130°
PT2N-4LPE-AWFC	PC Amber	350	2.8	90	105	589.7 nm	130°
PT2N-4LRE-W	Red	350	2.2	50	68	620.5 nm	130°
PT2N-4LGE-W	Green	350	3.1	90	135	525 K nm	130°
PT2N-4LBE-WFC	Blue	350	3.0	35	48	477.5 nm	130°



size : 2.0X 2.0mm

PT2A-4FWE-WFC	White	350	3.0	130	145	5600 K	120°
PT2A-4FPE-AWFC	PC Amber	350	3.0	80	100	589.7 nm	120°
PT2A-4FRE-W	Red	350	2.2	50	60	620.5 nm	120°
PT2A-4FGE-W	Green	350	3.1	80	90	525 K nm	120°
PT2A-4FBE-WFC	Blue	350	3.0	30	42	477.5 nm	120°

PLCC 3334



size: 3.3X 3.4mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	2θ _{1/2}
AL6A-RA1DF	Red	140	2.2	5.6	7.2	621 nm	120°
AL6A-GA1EF	Green	140	3.25	4.5	9.0	525 nm	120°
AL6A-BA1EF	Blue	140	3.1	2.24	3.5	470 nm	120°
AL6A-PA1EF-A	PC Amber	140	3.1	9.0	11.5	590.8 nm	120°

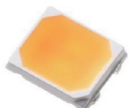
2835 series



size : 2.8X 3.5mm

Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
PZ2C-SFRE	Red	140	2.1	20	24	625 nm	120°
PZ2C-SFBE	Blue	140	3.0	16	19	475 nm	120°
PZ2C-SFAE	Amber	140	2.3	20	24	590 nm	120°
PZ2C-SFPE-R	PC Red	140	3.0	26	29	612 nm	120°
PZ2C-SFPE-A	PC Amber	140	3.0	56	60	591.8 nm	120°
PZ2E-TFRETFRE-Y	Red	60	2.2	8	10	625 nm	120°
PZ2E-TFAETFAE-Y	Amber	60	2.4	8	10	590 nm	120°


2835 series

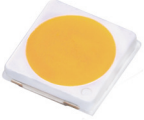



size : 2.8X 3.5mm

Part No.	Color	Test Current (Max. mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
PL2N-FFWE-Y3SCR8	White	100	9.6	150	162	6500 K	120°
PL2N-FFNE-Y3SCR8	Neutral White	100	9.6	150	162	4000 K	120°
PL2N-FFVE-Y3SCR8	Warm White	100	9.6	130	145	2700 K	120°
PL2N-FFWE-Y3SCR9	White	100	9.6	120	135	6500 K	120°
PL2N-FFNE-Y3SCR9	Neutral White	100	9.6	120	135	4000 K	120°
PL2N-FFVE-Y3SCR9	Warm White	100	9.6	115	125	2700 K	120°
PZ2E-TFWETFWE-Y50R8	White	60	2.85	30	31	2600-7000K	120°
PZ2E-TFWETFWE-Y57R8	White	60	2.85	30	31	2600-7000K	120°
PZ2E-TFWETFWE-Y65R8	White	60	2.85	30	31	2600-7000K	120°
PZ2E-TFNETFNE-Y40R8	Neutral White	60	2.85	30	31	2600-7000K	120°
PZ2E-TFVETFVE-Y27R8	Warm White	60	2.85	27	28	2600-7000K	120°
PZ2E-TFVETFVE-Y30R8	Warm White	60	2.85	28	29	2600-7000K	120°

3535 series

	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
 size : 3.45 X 3.45 mm	PK2N-4LPE-SASD	 PC Amber	350	2.95	90	112	589 nm	130°
 size : 3.45 X 3.46 mm	PK2L-4MRE-ESD	 Red	350	2.15	70	85	622 nm	120°
 size : 3.45X 3.45mm	PB2H-4MPE-BWFC	 Blue	350	2.8	60	72	472.5 nm	110°
 size : 3.45X 3.45mm	PB2H-4MWE-HWFC	 White	700	2.9	340	375	5600 K	110°

	Part No.	Color	Test Current (mA)	Vf (Typ.)	Lumens (Min.)	Lumens (Typ.)	CCT (Typ.)	$2\theta_{1/2}$
 size : 3.0 X 3.0 mm	PJ2N-1FWE-2CR7L	White	350	3.1	120	148	-	120°
 size : 1.0 X 1.0 mm	PCSP-CPWB-1010CK	White	15	5.55	4.0	9.0	15000K	160°