



High-Power LEDs/ChipLEDs

Avago Technologies' InGaN-based 1W high-power LED is an easy-to-use high-flux output SMT package which is compatible with standard IR solder reflow process, has an extremely low package thermal resistance with a robust moisture sensitivity level, and is designed with silicone encapsulation to maintain long operation life of the LED. A slim profile and a smooth radiation pattern make the package ideal for many solid-state lighting applications.

Avago's 3W ASMT-MW20 high-power LED is capable of being driven at high currents to deliver up to 160 lm of illumination which provides an energy efficient and robust high-output light source for designers of portable, architectural, decorative, and backlighting applications.

ChipLEDs from Avago Technologies utilize AllnGaP and InGaN material technology delivering high luminous efficiency capable of high-light output and low power over a wide range of colors. The ChipLEDs are offered in top-emitting and side-emitting packages. To facilitate pick-and-place assembly, they are provided in tape-and-reel.



Features ▶

High-Power LEDs

- High-flux output
- IR reflow solderable
- Low package thermal resistance of 10°C/W
- Silicone encapsulant
- Smooth radiation pattern

ChipLEDs

- SMD
- HB InGaN and AllnGaP

Benefits ▶

High-Power LEDs

- Easy-to-use and compatible to existing IR solder reflow process
- Low-thermal resistance ensures efficient heat dissipation
- Long operation life
- Smooth radiation pattern

ChipLEDs

- Pb-free
- Miniature package

Applications ▶

High-Power LEDs

- Portable appliances such as torchlights and headlamps
- Reading light, spotlight, accent light, and cove light
- Decorative, garden, and architectural lighting

ChipLEDs

- Keypad backlighting
- Status indicators

Product Specifications ▶

Part Number	Package Type	Color	Color Temp. (°K)	Dominant Wavelength (nm)	Max. Current (mA)	Tested Current (mA)	Forward Voltage (V)	Viewing Angle (deg)	Luminous Flux (lm)	Luminous Intensity (mcd)	Markets
ASMT-MW01-NFH00	High power	Cool white	4,000-10,000	NA	NA	350	3.6	110	35	NA	CL FL BL SI
ASMT-MY01-NFH00		Warm white	2,600-4,000	NA	NA	350	3.6	110	30	NA	CL FL BL SI
ASMT-MW00-NKK00		White	4,000-10,000	NA	NA	350	3.6	110	60	NA	CL BL SI SI
ASMT-MW09-NLL00		White	4,000-10,000	NA	NA	350	3.6	120	75	NA	CL BL SI SI
ASMT-MWA0-NKK00		Cool white	4,000-10,000	NA	NA	350	3.6	110	60	NA	CL BL SI SI
ASMT-MYAO-NJK00		Warm white	2,600-4,000	NA	NA	350	3.6	110	50	NA	CL BL SI SI
ASMT-MWLO-NKK00		Cool white	4,000-10,000	NA	NA	350	3.6	110	60	NA	CL BL SI SI
ASMT-MYLO-NJK00		Warm white	2,600-4,000	NA	NA	350	3.6	120	50	NA	CL BL SI SI
ASMT-RA45		ChipLED	Amber	NA	591	20	NA	2	145	NA	90
ASMT-RF45	Yellow		NA	573	20	NA	2	145	NA	60	TR BL
ASMT-RR45	Red		NA	622	20	NA	2	145	NA	120	TR BL
HSMF-C114	RGB		NA	626/525/470	20	NA	1.9/3.4/3.4	140	NA	85/180/70	BL
HSMF-C115	RGB		NA	626/525/470	20	NA	1.9/3.4/3.4	120	NA	80/170/60	BL
HSMR-C120	Blue		NA	473	20	NA	3.4	155	NA	55	BL
HSMR-C191-J00L5	Blue		NA	473	5	NA	2.85	140	NA	18	BL
HSMR-CL25	Blue		NA	473	5	NA	2.85	120	NA	18	BL
HSMW-CL25	White		NA	NA	5	NA	2.85	120	NA	70	BL
HSMW-C130	White		NA	NA	20	NA	3.6	145	NA	150	BL
HSMW-C191	White		NA	NA	20	NA	3.6	140	NA	200	BL

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Power PLCC-4 SMT LEDs

Avago Technologies' PLCC-4 SMT LEDs have high-reliability performance and are packed in the industrial standard PLCC-4 package. The 3-chips-in-1 package is suitable for applications requiring tight-LED pitch and high-resolution signs.



Features ▶

- Industrial PLCC-4 platform—compatible with IR and TTW soldering process
- High-reliability package—operating at -40°C to +100°C
- Mid-power intensity brightness with optimum-flux performance
- Minimum Iv degradation features over product lifetime
- High-brightness w/optimum-flux performance
- Available in all colors—amber, green, red, red orange, and blue
- Industry-standard PLCC-4 package
- High-brightness using AlInGaP and InGaN dice technologies
- Wide viewing angle at 120°
- Black surface for enhanced contrast

Benefits ▶

- High LOP for standard industrial PLCC-4 platform
- Less than 50 percent Iv degradation over operating condition at +25°C for 50K hours
- MSL level 2A certified
- LLW is binned at 8-color binning (tight-color bin for uniformity)
- High-brightness and focused radiation in the beam direction
- Single-color and intensity binning
- Tight-intensity bin range for uniform brightness

Applications ▶

- Interior automotive—instrument cluster, central console backlighting, instrument panel backlighting, and dome lighting
- Exterior automotive—RCL, CHSML, side-turn repeaters, turn signal, license plate illumination, puddle light, and reverse lamp
- ESS—channel lettering, contour lighting, and variable messaging signs
- Interior full-color signs
- Channel lettering
- Decorative and architectural signs



Product Specifications ▶												
Part Number	Package Type	Color	Color Temp. (°K)	Dominant Wavelength (nm)	Max. Current (mA)	Tested Current (mA)	Forward Voltage (V)	Viewing Angle (deg)	Luminous Flux (lm)	Luminous Intensity (mcd)	Markets	
ASMT-QWB2-NEFOE	Super 0.5W power PLCC-4	White	8-color binning	NA	150	NA	3.6	120	17.0	NA	TR BL SI	
ASMT-QAB2-FFEOE		Amber	NA	594.5	150	NA	2.7	120	11.4	NA	TR BL SI	
ASMT-QHB2-FDEOE		Red orange	NA	617.0	150	NA	2.7	120	14.0	NA	TR BL SI	
ASMT-QRB2-FCDOE		Red	NA	624.0	150	NA	3.1	120	9.8	NA	TR BL SI	
ASMT-QWBE-NFHOE		White	x=0.33/y=0.33	NA	150	150	3.6	120	19.5	NA	TR BL SI	
ASMT-QYBE-NEGOE		White	x=0.437/y=0.413	NA	150	150	3.6	120	18	NA	TR BL SI	
ASMT-QTB2-0A002		PLCC-4-multi color	Red	NA	628	20	NA	2.06	120	NA	505	TR BL SI
QSMF-A367-FP9J1	Green		NA	526	20	NA	3.32	120	NA	1,015	TR BL SI	
	Blue		NA	472	20	NA	3.32	120	NA	325	TR BL SI	
	Red		NA	635	30	NA	1.9	120	NA	250	SI	
QSMF-A368-F99J1	Green		NA	523	20	NA	3.4	120	NA	800	SI	
	Blue		NA	468	20	NA	3.4	120	NA	155	SI	
	Red		NA	635	30	NA	1.9	120	NA	140	SI	
ASMT-SWBM-NU803	Power PLCC-4	White	8-color binning	NA	30	NA	NA	120	2.8	560-1,400	TR	
HSMA-A431-YO0M1		Amber	NA	592	50	NA	2.2	30	NA	2,850	TR	
HSMC-A430-W50M1		Red	NA	626	50	NA	2.2	30	NA	1,125-3,550	TR	
HSMC-A430-W90M2		Green	NA	518	30	NA	3.9	30	NA	1,400-4,500	TR	
HSMV-A430-Y90M1		Red orange	NA	617	50	NA	2.8	30	NA	3,500	TR	
HSMN-A430-U50M2		Blue	NA	468	30	NA	3.9	30	NA	450-1,400	TR	
HSMA-A460-W50M1		Amber	NA	590	70	50	2.2	50	NA	2,100	TR SI	
HSMA-A461-X83M1		Amber	NA	590	70	50	2.2	50	NA	3,300	TR SI	
HSMC-A460-U30M1		Red	NA	626	70	50	2.2	50	NA	580	TR SI	
HSMC-A461-V00M1		Red	NA	626	70	50	2.2	50	NA	1,750	TR SI	
HSMC-A461-W40M1		Orange	NA	605	70	50	2.2	50	NA	1,850	TR SI	
ASMC-PRB9-TV005		Envisium power PLCC-4	Red	NA	630	50	NA	2.8	120	2.6-3.3	630-1,600	TR
ASMC-PHB9-TW005			Red orange	NA	617	50	NA	2.8	120	4.3-5	1,000-2,500	TR
ASMC-PAB9-TV005			Amber	NA	592	50	NA	2.8	120	3-3.8	630-1,600	TR
ASMC-QAB2-TACOE	Envisium 0.5W power PLCC-4	Amber	NA	593.5	150	NA	2.64	120	6.6	NA	TR SI	
ASMC-QHB2-TCDOE		Red orange	NA	619.3	150	NA	2.64	120	9.3	NA	TR SI	

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Extra-Bright InGaN/High-Brightness Thru-Hole Lamps

These extra bright LEDs are specifically designed for full-color/video and passenger information signs. They have very smooth, matched radiation patterns ensuring consistent color mixing and uniformity.



Features ▶

- Available in red, green, blue, amber, and white
- Available in 4 mm and 5 mm ovals, 35° x 70° and 50° x 100° viewing angles
- High luminous output
- Superior resistance to moisture

Benefits ▶

- Single color and intensity binning
- Tight-intensity bin range for uniform brightness
- Multiple viewing angle options

Applications ▶

- Outdoor full-color signs
- Commercial outdoor advertising signs
- Decorative and architectural signs
- Transportation signs

Product Specifications ▶

Part Number	Package Type	Color	Color Temp. (°K)	Dominant Wavelength (nm)	Max. Current (mA)	Tested Current (mA)	Forward Voltage (V)	Viewing Angle (deg)	Luminous Flux (lm)	Luminous Intensity (mcd)	Markets
HLMP-LG65-TX0ZZ	TH LED-4 mm oval	Red	NA	630	50	20	2.2	50 x 100	NA	800-1,990	CL FL TR SI
HLMP-HG63-TX0ZZ	TH LED-5 mm oval	Red	NA	630	50	20	2.2	50 x 100	NA	800-1,990	CL FL TR SI
HLMP-HL63-TX0DD		Amber	NA	592	50	20	2.2	50 x 100	NA	800-1,990	CL FL TR SI
HLMP-AG63-X10ZZ	TH LED-5 mm round	Red	NA	630	50	20	3.2	30 x 70	NA	1,600-3,500	CL FL SI
HLMP-AL63-WZ0DD		Amber	NA	592	50	20	2.3	30 x 70	NA	1,380-2,400	CL FL SI
HLMP-CB14-UX0DD		Blue	NA	470	30	20	3.2	15	NA	3,200-9,300	CL FL SI
HLMP-CB25-SV0DD		Blue	NA	470	30	20	3.2	23	NA	1,900-5,500	CL FL SI
HLMP-CB35-RU0DD		Blue	NA	470	30	20	3.2	30	NA	1,500-4,200	CL FL SI
HLMP-CM14-Z30DD		Green	NA	525	30	20	3.2	15	NA	12,000-35,000	CL FL SI
HLMP-CM25-X10DD		Green	NA	525	30	20	3.2	23	NA	7,200-21,000	CL FL SI
HLMP-CM35-X10DD		Green	NA	525	30	20	3.2	30	NA	7,200-21,000	CL FL SI
HLMP-EG13-UX0DD		Red	NA	626	50	20	2.2	15	NA	3,200-9,300	CL FL SI
HLMP-EG23-UX0DD		Red	NA	626	50	20	2.2	23	NA	3,200-9,300	CL FL SI
HLMP-EG37-TW0DD		Red	NA	626	50	20	2.2	30	NA	2,500-7,200	CL FL SI
HLMP-EL13-VY0DD		Amber	NA	590	50	20	2.2	15	NA	4,200-12,000	CL FL SI
HLMP-EL23-UX0DD		Amber	NA	590	50	20	2.2	23	NA	3,200-9,300	CL FL SI
HLMP-EL37-TW0DD		Amber	NA	590	50	20	2.2	30	NA	2,500-7,200	CL FL SI

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