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Solid State Lighting

Mid-Power and High-Power LEDs

Ambient Light Sensors



Your Imagination, Our Innovation
Sense • Illuminate • Connect

Solid-State Lighting **High-Power LEDs**

1 Watt and 3 Watt Mini High-Power LEDs



Description

The Mini High-Power LED family features a small scale package and comes with an isolated heat sink (for InGaN colors), which enables designs with multiple LEDs on a common heat sink without additional electrical isolation. A built-in Zener Diode enables a high ESD threshold of 16KV, thus it can be assembled in a non ESD safe environment.

Typical Applications

- Portable lighting appliances such as torchlight, bicycle headlight and miner light
- Street lighting, tunnel lighting
- Safety, exit and emergency sign lighting
- Specialty lighting such as task lighting, small reading lights, spot lights, track lights
- Architectural facade lighting and lighting for retail outlets, casinos, restaurants
- Accent or marker lighting, strip or step lighting
- Retail lighting, decorative lighting & garden lighting

Features



- Excellent lumen per dollar ratio, especially for the 3 Watt Series
- Small footprint (4mm x 5mm) and very low profile (1.85mm height)
- Direct heat transfer from the metal slug to the mother board
- Metal slug is electrically isolated (for InGaN colors)
- Wide viewing angle: 140° / 165°
- Low thermal resistance: 9°C/W
- Can be driven at stringent operating condition: LED Junction Temperature 150°C max *
- Operating temperature: -40°C to +135°C max *
- Long operating life due to silicone encapsulation
- Reliable: Non-Moisture sensitive - MSL 1 (unlimited floorlife, no baking required)
- Energy efficient: Power Dissipation starts at 1085mW
- Helps lower design cost due to:
 - Compatible with reflow soldering process
 - Non-ESD sensitive (threshold > 16kV)

* Refer to Data Sheet for details

Avago 3W Mini High-Power LEDs in LED Light Strip by Schneider Technologies



Secondary Optics

| Part Number | Description | FWHM | Holder | Manufacturer | |
|-------------|----------------------------|---------------|--------|--|---|
| 10048 | Plain tight Ø 26.5mm | 8.31 x 8.14 | 10461 |  www.carclo-optics.com |  |
| 10124 | Narrow frosted Ø 26.5mm | 13.59 x 13.26 | 10461 | | |
| 10108 | Medium frosted Ø 26.5mm | 23.82 x 23.78 | 10461 | | |
| 10049 | Elliptical Ø 26.5mm | 43.87 x 10.94 | 10461 | | |

This is a selection of the most popular lenses for Avago High-Power LEDs. The above listed manufacturers have a much broader offering of secondary optics specifically designed for Avago High-Power LEDs. For details, please check the internet or contact one of our Distributor Partners.

1 Watt and 3 Watt Mini-High-Power LEDs

| Product Number | Color | Color Temperature / Wavelength | Flux Bin (Luminous Flux / Radiometric Power @ 350mA) | Luminous Flux @ 350mA (typ.) | Luminous Flux @ 700mA (typ.) | Max. Current | Viewing Angle | Electrically Isolated Metal Slug | Packaging |
|----------------|-------|--------------------------------|--|------------------------------|------------------------------|--------------|---------------|----------------------------------|-----------|
|----------------|-------|--------------------------------|--|------------------------------|------------------------------|--------------|---------------|----------------------------------|-----------|

3 Watt Mini-High-Power LEDs

| | | | | | | | | | |
|-----------------|---------------|-------------------|--|-------|-------|-------|------|-----|------|
| ASMT-JW31-NTV01 | Cool White | 4500 - 10000K (1) | T (67.2 - 87.4lm) U (87.4 - 99.6lm) V (99.6 - 113.6lm) | 85lm | 150lm | 700mA | 140° | Yes | Reel |
| ASMT-JW31-NUV01 | Cool White | 4500 - 10000K (1) | U (87.4 - 99.6lm) V (99.6 - 113.6lm) | 95lm | 160lm | 700mA | 140° | Yes | Reel |
| ASMT-JN31-NTV01 | Neutral White | 3500 - 4500K (1) | T (67.2 - 87.4lm) U (87.4 - 99.6lm) V (99.6 - 113.6lm) | 85lm | 150lm | 700mA | 140° | Yes | Reel |
| ASMT-JN31-NUV01 | Neutral White | 3500 - 4500K (1) | U (87.4 - 99.6lm) V (99.6 - 113.6lm) | 95lm | 160lm | 700mA | 140° | Yes | Reel |
| ASMT-JY31-NSU01 | Warm White | 2700 - 3500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) U (87.4 - 99.6lm) | 70lm | 120lm | 700mA | 140° | Yes | Reel |
| ASMT-JA30-ARS01 | Amber | 587-597nm (2) | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | 80lm | 700mA | 165° | No | Reel |
| ASMT-JH30-ARS01 | Red-Orange | 610-620nm | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | 80lm | 700mA | 165° | No | Reel |
| ASMT-JR30-ARS01 | Red | 620-635nm | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | 80lm | 700mA | 165° | No | Reel |
| ASMT-JG31-NST01 | Green | 515-535nm (2) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 70lm | 120lm | 700mA | 165° | Yes | Reel |
| ASMT-JB31-NMP01 | Blue | 460-480nm (2) | M (13.9 - 18.1lm) N (18.1 - 23.5lm) P (23.5 - 30.6lm) | 20lm | 33lm | 700mA | 165° | Yes | Reel |
| ASMT-JL31-NPQ01 | Royal-Blue | 440-460nm (2,3) | P (355 - 435mW) Q (435 - 515mW) | 435mW | 650mW | 700mA | 165° | Yes | Reel |

1 Watt Mini-High-Power LEDs

| | | | | | | | | | |
|-----------------|---------------|-------------------|---|-------|---|-------|------|-----|------|
| ASMT-JW11-NTT01 | Cool White | 4500 - 10000K (1) | T (67.2 - 87.4lm) | 70lm | - | 350mA | 140° | Yes | Reel |
| ASMT-JN11-NST01 | Neutral White | 3500 - 4500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | - | 350mA | 140° | Yes | Reel |
| ASMT-JY11-NST01 | Warm White | 2700 - 3500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 60lm | - | 350mA | 140° | Yes | Reel |
| ASMT-JA10-ARS01 | Amber | 587-597nm (2) | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | - | 350mA | 165° | No | Reel |
| ASMT-JH10-ARS01 | Red-Orange | 610-620nm | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | - | 350mA | 165° | No | Reel |
| ASMT-JR10-ARS01 | Red | 620-635nm | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 45lm | - | 350mA | 165° | No | Reel |
| ASMT-JG11-NST01 | Green | 515-535nm (2) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 70lm | - | 350mA | 165° | Yes | Reel |
| ASMT-JB11-NLN01 | Blue | 460-480nm (2) | L (10.7 - 13.9lm) M (13.9 - 18.1lm) N (18.1 - 23.5lm) | 15lm | - | 350mA | 165° | Yes | Reel |
| ASMT-JL11-NMP01 | Royal-Blue | 440-460nm (2,3) | M (225 - 275mW) N (275 - 355mW) P (355 - 435mW) | 320mW | - | 350mA | 165° | Yes | Reel |

Notes:

- (1) Narrow Color Temperature selections are available on request
- (2) Narrow color bin selections for blue, green, amber and royal-blue are available on request.
- (3) For royal-blue, the wavelength shown in the above table is peak wavelength.

Solid-State Lighting **High-Power LEDs**

1 Watt High-Power LEDs



Description

This High-Power package has a footprint which is most common in the industry. It is an ideal solution to upgrade your existing applications. Its robust design supports a long life performance and IR Reflow soldering capability. It also comes with an electrically isolated heat sink for white, blue, and green colors.

Typical Applications

- Architectural lighting
- Channel backlighting
- Contour lighting
- Retail display lighting
- Decorative lighting
- Garden lighting

Features


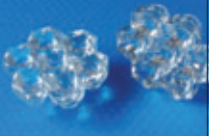




- Very good lumen per dollar ratio
- Most common footprint (7.4mm x 13.6mm), 4.1mm height
- Direct heat transfer from the metal slug to the mother board
- Wide viewing angle: 130°
- Metal slug is electrically isolated (for InGaN colors)
- Low thermal resistance: 10°C/W
- Can be driven at stringent operating condition: LED Junction Temperature 135°C max *
- Operating temperature: -40°C to +120°C max *
- Long operating life due to silicone encapsulation
- Moisture sensitive level (MSL) 2A: baking required after 4 weeks floorlife
- Energy efficient: Power Dissipation starts at 1085mW
- Helps lower design cost due to:
 - Compatible with reflow soldering process
 - Non-ESD sensitive (threshold > 16kV)

* Refer to Data Sheet for details



Avago 1W High-Power LEDs in Downlight by Schneider Technologies

Secondary Optics

| Part Number | Description | FWHM | Holder | Manufacturer | |
|--------------|-------------------------------|---------------|------------|---|---|
| 120 | Hexagonal 16.5 x 14.3mm | 6° | 239 |  www.polymer-optics.co.uk |  |
| 201 | Hexagonal 16.5 x 14.3mm | 15° | 239 | | |
| 124 | Hexagonal 16.5 x 14.3mm | 25° | 239 | | |
| 126 | Oval, hexagonal 16.5 x 14.3mm | 6 x 25° | 239 | | |
| 10048 | Plain tight Ø 26.5mm | 6.91 x 6.89 | 10469 |  www.carclo-optics.com |  |
| 10124 | Narrow frosted Ø 26.5mm | 11.27 x 10.94 | 10469 | | |
| 10108 | Medium frosted Ø 26.5mm | 22.32 x 21.97 | 10469 | | |
| 10049 | Eliptical Ø 26.5mm | 44.01 x 8.14 | 10469 | | |
| PL1231A06 | Round Ø 30mm | 10° | integrated |  www.khatod.com |  |
| PL1231A25LSD | Round Ø 30mm | 20° | integrated | | |
| PL1231A40 | Round Ø 30mm | 40° | integrated | | |
| PL123725 | Triple Ø 35mm | 20° | integrated | | |

This is a selection of the most popular lenses for Avago High-Power LEDs. The above listed manufacturers have a much broader offering of secondary optics specifically designed for Avago High-Power LEDs. For details, please check the internet or contact one of our Distributor Partners.

1 Watt High-Power LEDs

| Product Number | Color | Color Temperature / Wavelength | Flux Bin (Luminous Flux / Radiometric Power @ 350mA) | Luminous Flux @ 350mA (typ.) | Max. Current | Viewing Angle | Electrically Isolated Metal Slug | Packaging |
|-----------------|---------------|--------------------------------|---|------------------------------|--------------|---------------|----------------------------------|-----------|
| ASMT-AW00-NST00 | Cool White | 4500 - 10000K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AW00-NSTJ0 | Cool White | 5000 - 6300K | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AW00-NSU00 | Cool White | 4500 - 10000K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) U (87.4 - 99.6lm) | 70lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AW00-NTU00 | Cool White | 4500 - 10000K (1) | T (67.2 - 87.4lm) U (87.4 - 99.6lm) | 80lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AN00-NST00 | Neutral White | 3500 - 4500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AN00-NSTJ0 | Neutral White | 3500 - 4100K | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AN00-NSTK0 | Neutral White | 3800 - 4500K | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AN00-NSU00 | Neutral White | 3500 - 4500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) U (87.4 - 99.6lm) | 70lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AN00-NTU00 | Neutral White | 3500 - 4500K (1) | T (67.2 - 87.4lm) U (87.4 - 99.6lm) | 80lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AY00-NRS00 | Warm White | 2700 - 3500K (1) | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 60lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AY00-NRSJ0 | Warm White | 2850 - 3250K | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 60lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AY00-NRSK0 | Warm White | 3050 - 3500K | R (39.8 - 51.7lm) S (51.7 - 67.2lm) | 60lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AY00-NST00 | Warm White | 2700 - 3500K (1) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AA00-AQR00 | Amber | 587-597nm (3) | Q (30.6 - 39.8lm) R (39.8 - 51.7lm) | 43lm | 350mA | 130° | No | Tube (2) |
| ASMT-AA00-ARR00 | Amber | 587-597nm (3) | R (39.8 - 51.7lm) | 43lm | 350mA | 130° | No | Tube (2) |
| ASMT-AH00-AQR00 | Red-Orange | 610-620nm | Q (30.6 - 39.8lm) R (39.8 - 51.7lm) | 43lm | 350mA | 130° | No | Tube (2) |
| ASMT-AR00-AQR00 | Red | 620-635nm | Q (30.6 - 39.8lm) R (39.8 - 51.7lm) | 43lm | 350mA | 130° | No | Tube (2) |
| ASMT-AR00-ARR00 | Red | 620-635nm | R (39.8 - 51.7lm) | 43lm | 350mA | 130° | No | Tube (2) |
| ASMT-AG00-NST00 | Green | 515-535nm (3) | S (51.7 - 67.2lm) T (67.2 - 87.4lm) | 65lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AB00-NLN00 | Blue | 460-480nm (3) | L (10.7 - 13.9lm) M (13.9 - 18.1lm) N (18.1 - 23.5lm) | 15lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AB00-NMPO0 | Blue | 460-480nm (3) | M (13.9 - 18.1lm) N (18.1 - 23.5lm) P (23.5 - 30.6lm) | 18lm | 350mA | 130° | Yes | Tube (2) |
| ASMT-AL00-NMPO0 | Royal-Blue | 440-460nm (3, 4) | M (225 - 275mW) N (275 - 355mW) P (355 - 435mW) | 320mW | 350mA | 130° | Yes | Tube (2) |
| ASMT-AL00-NNP00 | Royal-Blue | 440-460nm (3, 4) | N (275 - 355mW) P (355 - 435mW) | 320mW | 350mA | 130° | Yes | Tube (2) |

Notes:

- (1) Narrow Color Temperature selections are available on request.
- (2) All above listed LEDs are also available in Reel packing.
- (3) Narrow color bin selections for blue, green, amber and royal-blue are available on request.
- (4) For royal-blue, the wavelength shown in the above table is peak wavelength.

Solid-State Lighting **Mid- and High-Power LEDs**

Moonstone™ Family

Description

Avago's Moonstone™ high-power LED-family has the widest high power offering on the same platform (0.5W, 1W, and 3W). The industry-proven power transistor package grants a robust and reliable performance. The exposed pad design has excellent heat transfer from the package to the motherboard.



Moonstone™ Emitter



Moonstone™ Star 1
Module (MCPCB)



Moonstone™ Star 2
Module (MCPCB)

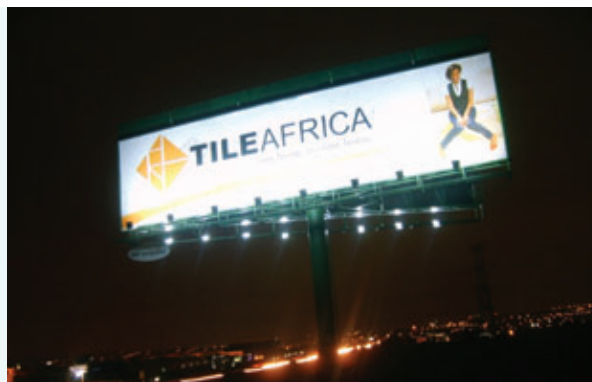
Typical Applications

- Portable lighting – flash light, bicycle headlight & miner light
- Safety / security lighting – exit and emergency sign light
- Task lighting – reading light, spot light, track light
- General lighting – street lighting, interior lighting
- Decorative lighting – cove lighting, contour lighting and garden lighting
- Billboard backlighting – sign backlighting

Features

- Power: 0.5 Watt, 1 Watt, and 3 Watt
- Low profile (3.3mm height), footprint is 10mm x 15.85mm
- Direct heat transfer from the metal slug to the mother board
- Option with electrically isolated metal slug is available (only for InGaN colors)
- Wide viewing angle: 110° / 120°
- Low thermal resistance: 10°C/W min *
- Can be driven at stringent operating condition: LED Junction Temperature 145°C max *
- Operating temperature: -40°C to +120°C max *
- Long operating life due to silicone encapsulation
- Energy efficient: Power Dissipation starts at 525mW
- Helps lower design cost due to:
 - Compatible with reflow soldering process
 - Non-ESD sensitive (threshold > 16kV)

* Refer to Data Sheet for details



Billboard Illumination
using Avago 3W
Moonstone™ –
South Africa


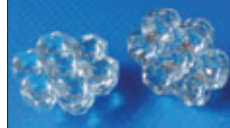






3 Watt Moonstone™ High-Power LEDs

| Product Number | Color | Color Temperature | Flux Bin (Luminous Flux @ 700mA) | Luminous Flux @ 700mA (typ.) | Max. Current | Viewing Angle | Clear / Diffused | Type | Electrically Isolated Metal Slug | Packaging |
|-----------------|------------|-------------------|-------------------------------------|------------------------------|--------------|---------------|------------------|---------|----------------------------------|-----------|
| ASMT-MW20-NNN00 | Cool White | 4000 - 10000K (1) | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MW22-NNN00 | Cool White | 4000 - 10000K (1) | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MW22-NNNS0 | Cool White | 4000 - 4500K | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MW22-NNNU0 | Cool White | 7000 - 10000K | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MW22-NNNW0 | Cool White | 5600 - 7000K | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MW22-NNNZ0 | Cool White | 4500 - 5600K | N (124 - 161lm) | 145lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MWE0-NMN00 | Cool White | 4000 - 10000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MWE2-NMN00 | Cool White | 4000 - 10000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Diffused | Emitter | Yes | Tube (2) |
| ASMT-MY20-NMN00 | Warm White | 2600 - 4000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MY22-NMN00 | Warm White | 2600 - 4000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MY22-NMNU0 | Warm White | 3500 - 4000K | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MY22-NMNW0 | Warm White | 3000 - 3500K | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MY22-NMNZ0 | Warm White | 2600 - 3000K | M (95.0 - 124lm) N (124 - 161lm) | 125lm | 700mA | 120° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MYE0-NMN00 | Warm White | 2600 - 4000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 110lm | 700mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MYE2-NMN00 | Warm White | 2600 - 4000K (1) | M (95.0 - 124lm) N (124 - 161lm) | 110lm | 700mA | 120° | Diffused | Emitter | Yes | Tube (2) |

Notes:

- (1) Narrow Color Temperature selections are available on request
- (2) The above listed LEDs are also available in Reel packing

Secondary Optics for 3 Watt, 1 Watt, and 0.5 Watt Moonstone™ Series

| Part Number | Description | FWHM | Holder | Manufacturer | |
|-------------|----------------------------------|----------|------------|---|---|
| 170 | Narrow Angle Collimator | 6° | 182 |  www.polymer-optics.co.uk |  |
| 198 | Narrow Angle Collimator | 15° | 182 | | |
| 171 | Wide Angle Collimator | 25° | 182 | | |
| 172 | Elliptical Beam | 6 x 25° | 182 | | |
| 10391 | Plain tight Ø 26.5mm | 12° | 10469 |  technical plastics www.carclo-optics.com |  |
| 10392 | Narrow frosted Ø 26.5mm | 17.2° | 10469 | | |
| 10393 | Medium frosted Ø 26.5mm | 25.5° | 10469 | | |
| 10395 | Elliptical Ø 26.5mm | 44 x 16° | 10469 | | |
| PLVG1 26606 | Narrow Angle Collimator | 10° | integrated |  LENSES FOR POWER LED www.khatod.com |  |
| PLVG1 26625 | Medium Angle Collimator | 25° | integrated | | |
| PLVG1 26640 | Wide Angle Collimator | 40° | integrated | | |
| PLVG1 26825 | Diffused Medium Angle Collimator | 25° | integrated | | |
| ASMT-M006 | Collimator Snap function Ø 29mm | 6° | integrated |  www.avagotech.com |  |
| ASMT-M015 | Collimator Snap function Ø 20mm | 15° | integrated | | |
| ASMT-M030 | Collimator Snap function Ø 20mm | 30° | integrated | | |

This is a selection of the most popular lenses for Avago High-Power LEDs. The above listed manufacturers have a much broader offering of secondary optics specifically designed for Avago High-Power LEDs. For details, please check the internet or contact one of our Distributor Partners.

1 Watt Moonstone™ High-Power LEDs

| Product Number | Color | Color Temperature / Wavelength | Flux Bin (Luminous Flux @ 350mA) | Luminous Flux @ 350mA (typ.) | Max. Current | Viewing Angle | Clear / Diffused | Type | Electrically Isolated Metal Slug | Packaging |
|-----------------|------------|--------------------------------|---|------------------------------|--------------|---------------|------------------|---------|----------------------------------|-----------|
| ASMT-MW03-NJK00 | Cool White | 4000 - 10000K (1) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 55lm | 350mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MW04-NJK00 | Cool White | 4000 - 10000K (1) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 55lm | 350mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MWK0-NKK00 | Cool White | 4000 - 10000K (1) | K (56.0 - 73.0lm) | 65lm | 350mA | 110° | Clear | Star 2 | - | Tray |
| ASMT-MWB9-NKL00 | Cool White | 4000 - 10000K (1) | K (56.0 - 73.0lm) L (73.0 - 95.0lm) | 73lm | 500mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MW05-NLL00 | Cool White | 4000 - 10000K (1) | L (73.0 - 95.0lm) | 80lm | 500mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MW06-NLL00 | Cool White | 4000 - 10000K (1) | L (73.0 - 95.0lm) | 80lm | 500mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MW09-NMM00 | Cool White | 4000 - 10000K (1) | M (95.0 - 124lm) | 110lm | 500mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MY03-NJK00 | Warm White | 2600 - 4000K (1) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 50lm | 350mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MY04-NJK00 | Warm White | 2600 - 4000K (1) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 50lm | 350mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MYK0-NKK00 | Warm White | 2600 - 4000K (1) | K (56.0 - 73.0lm) | 60lm | 350mA | 110° | Clear | Star 2 | - | Tray |
| ASMT-MYB9-NKL00 | Warm White | 2600 - 4000K (1) | K (56.0 - 73.0lm) L (73.0 - 95.0lm) | 68lm | 500mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MY05-NKL00 | Warm White | 2600 - 4000K (1) | K (56.0 - 73.0lm) L (73.0 - 95.0lm) | 73lm | 500mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MY06-NKL00 | Warm White | 2600 - 4000K (1) | K (56.0 - 73.0lm) L (73.0 - 95.0lm) | 73lm | 500mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MY09-NLM00 | Warm White | 2600 - 4000K (1) | L (73.0 - 95.0lm) M (95.0 - 124lm) | 95lm | 500mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MA00-AGH00 | Amber | 582-594.5nm (3) | G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 35lm | 350mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MAK0-AGH00 | Amber | 582-594.5nm (3) | G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 35lm | 350mA | 120° | Clear | Star 2 | - | Tray |
| ASMT-MR00-AHJ00 | Red | 620-635nm | H (33.0 - 43.0lm) J (43.0 - 56.0lm) | 40lm | 350mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MRK0-AHJ00 | Red | 620-635nm | H (33.0 - 43.0lm) J (43.0 - 56.0lm) | 40lm | 350mA | 120° | Clear | Star 2 | - | Tray |
| ASMT-MG00-NJK00 | Green | 515-535nm (3) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 60lm | 350mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MGK0-NJK00 | Green | 515-535nm (3) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) | 60lm | 350mA | 120° | Clear | Star 2 | - | Tray |
| ASMT-MB00-NDF00 | Blue | 460-480nm (3) | D (11.5 - 15.0lm) E (15.0 - 19.5lm) F (19.5 - 25.5lm) | 15lm | 350mA | 120° | Clear | Emitter | No | Tube (2) |
| ASMT-MBK0-NDF00 | Blue | 460-480nm (3) | D (11.5 - 15.0lm) E (15.0 - 19.5lm) F (19.5 - 25.5lm) | 15lm | 350mA | 120° | Clear | Star 2 | - | Tray |

Notes:

- (1) Narrow Color Temperature selections are available on request
- (2) The above listed LEDs are also available in Reel packing
- (3) Narrow color bin selections for blue, green and amber are available on request

0.5 Watt Moonstone™ Mid-Power LEDs

| Product Number | Color | Color Temperature | Flux Bin (Luminous Flux @ 150mA) | Luminous Flux @ 150mA (typ.) | Max. Current | Viewing Angle | Clear / Diffused | Type | Electrically Isolated Metal Slug | Packaging |
|-----------------|------------|-------------------|---|------------------------------|--------------|---------------|------------------|---------|----------------------------------|-----------|
| ASMT-MW60-NFH00 | Cool White | 4000 - 10000K (1) | F (19.5 - 25.5lm) G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 30lm | 150mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MW62-NFH00 | Cool White | 4000 - 10000K (1) | F (19.5 - 25.5lm) G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 30lm | 150mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MWHO-NFH00 | Cool White | 4000 - 10000K (1) | F (19.5 - 25.5lm) G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 27lm | 150mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MWH2-NFH00 | Cool White | 4000 - 10000K (1) | F (19.5 - 25.5lm) G (25.5 - 33.0lm) H (33.0 - 43.0lm) | 27lm | 150mA | 120° | Diffused | Emitter | Yes | Tube (2) |
| ASMT-MY60-NEG00 | Warm White | 2600 - 4000K (1) | E (15.0 - 19.5lm) F (19.5 - 25.5lm) G (25.5 - 33.0lm) | 25lm | 150mA | 110° | Clear | Emitter | No | Tube (2) |
| ASMT-MY62-NEG00 | Warm White | 2600 - 4000K (1) | E (15.0 - 19.5lm) F (19.5 - 25.5lm) G (25.5 - 33.0lm) | 25lm | 150mA | 110° | Clear | Emitter | Yes | Tube (2) |
| ASMT-MYH0-NEG00 | Warm White | 2600 - 4000K (1) | E (15.0 - 19.5lm) F (19.5 - 25.5lm) G (25.5 - 33.0lm) | 22lm | 150mA | 120° | Diffused | Emitter | No | Tube (2) |
| ASMT-MYH2-NEG00 | Warm White | 2600 - 4000K (1) | E (15.0 - 19.5lm) F (19.5 - 25.5lm) G (25.5 - 33.0lm) | 22lm | 150mA | 120° | Diffused | Emitter | Yes | Tube (2) |

Notes:

- (1) Narrow Color Temperature selections are available on request
- (2) The above listed LEDs are also available in Reel packing

Solid-State Lighting **RGB LEDs**

3 x 1 Watt RGB Moonstone™ LED



Description

The advanced 3x1Watt RGB Moonstone™ package delivers typ.108lumens at 350mA. The selection of the Red, Green, and Blue dies helps to achieve a high flux (typ. 90 lumen) D65 white color point and a wide color gamut. The robust package design makes it an excellent choice for color mixing applications.

Typical Applications

- Stage and event lighting
- Full color signs and large area video walls
- Contour lighting
- Cove lighting
- Architectural lighting
- Garden lighting
- Decorative lighting
- Commercial lighting
- Mood lighting

Features

- High flux output of typ. 108lm at 3x350mA
- High White flux output of typ. 90lm
- Low profile (3.3mm height), footprint is 10mm x 15.85mm
- Wide viewing angle: 120°
- Low thermal resistance: 20°C/W min *
- Can be driven at stringent operating condition: LED Junction Temperature 125°C
- Operating temperature: -40°C to +105°C
- Long operating life due to silicone encapsulation
- Energy efficient: Power Dissipation starts at 1050mW
- Helps lower design cost due to:
 - Compatible with reflow soldering process
 - Non-ESD sensitive (threshold > 16kV)

* Refer to Data Sheet for details

Avago 3x1Watt RGB Moonstone™ in bar lighting application





3 x 1 Watt RGB Moonstone™ High-Power LED

| Product Number | Color | Dominant Wavelength | Flux Bin (Luminous Flux @ 350mA) | Luminous Flux @ 350mA (typ.) | Max. Current | Viewing Angle | Electrically Isolated Metal Slug | Packaging |
|-----------------|-------|---------------------|---|------------------------------|--------------|---------------|----------------------------------|-----------|
| ASMT-MT00-00001 | Red | 620 - 635nm | H (33.0 - 43.0lm) J (43.0 - 56.0lm) | 40lm | 350mA | 120° | No | Reel |
| | Green | 515 - 535nm (1) | J (43.0 - 56.0lm) K (56.0 - 73.0lm) L (73.0 - 95.0lm) | 55lm | 350mA | 120° | Yes | |
| | Blue | 460 - 480nm (1) | C (9.0 - 11.5lm) D (11.5 - 15.0lm) E (15.0 - 19.5lm) | 13lm | 350mA | 120° | Yes | |

Notes: (1) Narrow Color Bin selections for Green and Blue are available on request

Secondary Optics

| Part Number | Description | FWHM | Holder | Manufacturer | |
|-------------|----------------------------|------|------------|---|---|
| 229 | 30mm Color Mixer Reflector | 10° | Integrated |  www.polymer-optics.co.uk |  |

This is one of most popular lenses for Avago High-Power LEDs. The above listed manufacturer has a much broader offering of secondary optics specifically designed for Avago High-Power LEDs. For details, please check the internet or contact one of our Distributor Partners.

Tri-color PLCC4 and PLCC6 Surface Mount LEDs

Description

This family of SMT LEDs packaged in the form of PLCC with separate driving capability for each color is suitable for indoor and outdoor applications. Its low thermal resistance enables a higher driving current in warm ambient conditions. The PLCC6 package is available with black surface for high contrast ratio, while the PLCC4 package is additionally available as a blackbody.

Typical Applications

- Electronic signs and signals
- Interior and exterior full-color signs
- Interior automotive and backlighting
- Office automation, home appliances, industrial equipment
- Color-changing mood-lighting applications

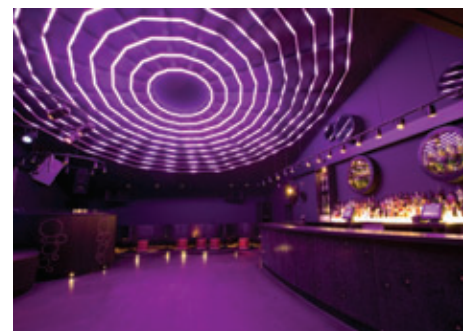
Features

- Industry Standard PLCC-4/PLCC-6 package with individual addressable pin-out for higher flexibility of driving configuration for each color
- Extra high-brightness AlInGaP and InGaN dice technologies
- Minimum Iv 1.8cd (typical Iv 2.1cd) at 3x20mA *
- Black surface / full black body for increased contrast ratio
- Wide viewing angle: 115° / 120°
- Low thermal resistance: 60°C/W min *
- Can be driven at stringent operating condition: LED Junction Temperature 125°C
- Operating temperature: -40°C to +110°C
- Long operating life due to silicone encapsulation
- Compatible with reflow soldering process

* Refer to Data Sheet for details



Avago Tri-color PLCC6
Surface Mount LEDs in Rex,
Hilversum (NL), Designed
by DEP Nederland and
produced by Lux Lumen



Avago tri-color PLCC4 LEDs in an
installation in Covent Garden, London

Installation: United Visual Artists,
Product: tarm LED GmbH & Co. KG

RGB PLCC-4 and RGB PLCC-6 Surface Mount LEDs

| Product Number | Type | Color | Dominant Wavelength | Color Bin | Intensity Half-Bins | Min. Iv @ 20mA | Typ. Iv @ 20mA | Max. Current | Viewing Angle | Packaging |
|-----------------|----------------------|-------|---------------------|-----------|---------------------|----------------|----------------|--------------|---------------|-----------|
| ASMT-QTBO-0AA02 | Black-Surface PLCC-4 | Red | 621nm | - | U1,U2,V1,V2 | 450mcd | 620mcd | 50mA | 120° | Reel |
| | | Green | 528nm | C,D | V2,W1,W2,X1 | 900mcd | 1200mcd | 30mA | 120° | |
| | | Blue | 470nm | B,C | S2,T1,T2,U1 | 224mcd | 280mcd | 30mA | 120° | |
| ASMT-QTCO-0AA02 | Black-Body PLCC-4 | Red | 621nm | - | S1,S2,T1,T2 | 180mcd | 315mcd | 50mA | 115° | Reel |
| | | Green | 528nm | C,D | T1,T2,U1,U2 | 285mcd | 470mcd | 30mA | 115° | |
| | | Blue | 470nm | B,C | R1,R2,S1,S2 | 112.5mcd | 140mcd | 30mA | 115° | |
| ASMT-YTBO-0AA02 | Black-Surface PLCC-6 | Red | 621nm | - | U1,U2,V1,V2 | 450mcd | 648mcd | 50mA | 115° | Reel |
| | | Green | 528nm | C,D | V2,W1,W2,X1 | 900mcd | 1243mcd | 30mA | 115° | |
| | | Blue | 470nm | B,C | S2,T1,T2,U1 | 224mcd | 238mcd | 30mA | 115° | |

Solid-State Lighting **Mid-Power LEDs**

0.5 Watt Mid-Power PLCC4 LEDs



0.5 Watt PLCC-4



0.5 Watt Cool White PLCC-4



0.5 Watt Warm White PLCC-4

Description

This PLCC4 product is one of the smallest 0.5 Watt packages available on the market. The small size of the PLCC4 platform package enables higher packaging density on a given area compared to other half-Watt solutions available on the market. This higher drive current can be supported because of the enhanced heat dissipation capability which additionally allows you to operate the LED at up to +120°C ambient temperature.

Typical Applications

- Decorative and mood lighting
- Channel and counter lighting
- Advertisement panel backlighting
- Battery powered reading lamps and flashlights
- Interior automotive: Dome, map, and reading lamps, glove compartment illumination
- Exterior automotive: Tail lights and side repeater
- Display backlighting
- Signage

Features

- Industry Standard PLCC-4 package (3.2 x 2.8 x 1.9mm)
- High reliability package with enhanced silicone resin encapsulation
- Extra high-brightness AlInGaP and InGaN dice technologies
- Wide viewing angle: 120°
- Low thermal resistance: 40°C/W min *
- Can be driven at stringent operating condition: LED Junction Temperature 125°C
- Operating temperature: -40°C to +120°C max *
- Long operating life due to silicone encapsulation
- Reliable: Moisture sensitive level (MSL) 2 / 2A *
- Energy efficient: Power Dissipation starts at 450mW
- Compatible with IR and TTW soldering processes
- AEC-Q101 qualified

* Refer to Data Sheet for details

Avago 0.5W PLCC4 LEDs in
Tram Tango Basel by SBF




0.5 Watt Mid-Power PLCC-4 Surface Mount LEDs

| Product Number | Power | Color | Color Temperature / Dominant Wavelength | Color Bin | Flux Bin (Luminous Flux @ 150mA) | Luminous Flux @ 150mA (typ.) | Max. Current | Viewing Angle | Packaging |
|-----------------|----------|------------|---|-------------------------|---|------------------------------|--------------|---------------|-----------|
| ASMT-QWBC-NJKOE | 0.5 Watt | Cool White | 4500 - 10000K (1) | 5K,5L,6K,6L,7K,7L,8K,8L | J (33.0 - 43.0lm) K (43.0 - 56.0lm) | 38.0lm | 150mA | 120° | Reel |
| ASMT-QWBC-NHJOE | 0.5 Watt | Cool White | 4500 - 10000K (1) | 5K,5L,6K,6L,7K,7L,8K,8L | H (25.5 - 33.0lm) J (33.0 - 43.0lm) | 30.0lm | 150mA | 120° | Reel |
| ASMT-QWBE-NFHOE | 0.5 Watt | Cool White | 4500 - 10000K (1) | 5K,5L,6K,6L,7K,7L,8K,8L | F (15.0 - 19.5lm) G (19.5 - 25.5lm) H (25.5 - 33.0lm) | 19.5lm | 150mA | 120° | Reel |
| ASMT-QWBE-NFHCE | 0.5 Watt | Cool White | 5000 - 5600K | 7K,7L | F (15.0 - 19.5lm) G (19.5 - 25.5lm) H (25.5 - 33.0lm) | 19.5lm | 150mA | 120° | Reel |
| ASMT-QWBE-NFHDE | 0.5 Watt | Cool White | 4500 - 5000K | 8K,8L | F (15.0 - 19.5lm) G (19.5 - 25.5lm) H (25.5 - 33.0lm) | 19.5lm | 150mA | 120° | Reel |
| ASMT-QYBC-NHJOE | 0.5 Watt | Warm White | 2500 - 4800K (1) | H,J,K,L,M,N,P,Q,R | H (25.5 - 33.0lm) J (33.0 - 43.0lm) | 31.0lm | 150mA | 120° | Reel |
| ASMT-QYBC-NGJOE | 0.5 Watt | Warm White | 2500 - 4800K (1) | H,J,K,L,M,N,P,Q,R | G (19.5 - 25.5lm) H (25.5 - 33.0lm) J (33.0 - 43.0lm) | 24.0lm | 150mA | 120° | Reel |
| ASMT-QYBE-NEGOE | 0.5 Watt | Warm White | 2500 - 4800K (1) | H,J,K,L,M,N,P,Q,R | E (11.5 - 15.0lm) F (15.0 - 19.5lm) G (19.5 - 25.5lm) | 18.0lm | 150mA | 120° | Reel |
| ASMT-QABD-AEF0E | 0.5 Watt | Amber | 593.1nm | 2,3,4,5,6 | E (11.5 - 15.0lm) F (15.0 - 19.5lm) | 16.5lm | 150mA | 120° | Reel |
| ASMT-QAB2-FDE0E | 0.5 Watt | Amber | 594.5nm | 2,3,4,5,6 | D (9.0 - 11.5lm) E (11.5 - 15.0lm) | 11.4lm | 150mA | 120° | Reel |
| ASMT-QHBD-AFH0E | 0.5 Watt | Red-Orange | 616.1nm | 1,2,3 | F (15.0 - 19.5lm) G (19.5 - 25.5lm) H (25.5 - 33.0lm) | 17.5lm | 150mA | 120° | Reel |
| ASMT-QHB2-FF0E | 0.5 Watt | Red-Orange | 617.0nm | 1,2,3 | E (11.5 - 15.0lm) F (15.0 - 19.5lm) | 14.0lm | 150mA | 120° | Reel |
| ASMT-QRBD-AEF0E | 0.5 Watt | Red | 621.1nm | - | E (11.5 - 15.0lm) F (15.0 - 19.5lm) | 16.5lm | 150mA | 120° | Reel |
| ASMT-QRB2-FDE0E | 0.5 Watt | Red | 624.0nm | - | D (9.0 - 11.5lm) E (11.5 - 15.0lm) | 11.4lm | 150mA | 120° | Reel |
| ASMT-QRB2-FC0E | 0.5 Watt | Red | 624.0nm | - | C (7.0 - 9.0lm) D (9.0 - 11.5lm) | 9.8lm | 150mA | 120° | Reel |
| ASMT-QGBE-NFH0E | 0.5 Watt | Green | 522.0nm | 1,2,3,4 | F (15.0 - 19.5lm) G (19.5 - 25.5lm) H (25.5 - 33.0lm) | 23.0lm | 150mA | 120° | Reel |
| ASMT-QBBC-NAC0E | 0.5 Watt | Blue | 464.0nm | 1,2,3,4 | A (4.3 - 5.5lm) B (5.5 - 7.0lm) C (7.0 - 9.0lm) | 7.0lm | 150mA | 120° | Reel |
| ASMT-QBBE-NOB0E | 0.5 Watt | Blue | 464.5nm | 1,2,3,4 | O (3.4 - 4.3lm) A (4.3 - 5.5lm) B (5.5 - 7.0lm) | 4.8lm | 150mA | 120° | Reel |

Notes:

(1) Narrow Color Temperature selections are available on request

Secondary Optics

| Part Number | Description | FWHM | Holder | Manufacturer |
|-------------|------------------------------|------|------------|--|
| 210 | 14mm Linear Collimator Optic | 15° | integrated |  www.polymer-optics.co.uk |



Digital and Analog Ambient Light Sensors



Description

Avago Technologies offers a wide range of Ambient Light Sensors; linear analog sensors fit any kind of application, logarithmic analog ones are very suitable for outdoor applications, and sensors with digital output are ideal for high accuracy and ease of use. Avago's Ambient Light sensors offer an excellent IR filtering as well as a wide luminosity (LUX) coverage.

Typical Applications

- Automatic residential & commercial lighting management
- Control of display backlighting
- Automotive Instrumentation clusters
- Signage

Features

- Spectral Responsivity close to that of the human eye
- Precise measurement under diverse lighting conditions
- Miniature Chipled package
- Operating temperature -40 to +85 °C
- High level of integration

Analog Ambient Light Sensor

- Linear and Logarithm parts are available
- Reverse mounting parts are available
- Wide selection of supply voltage

Digital Ambient Light Sensor

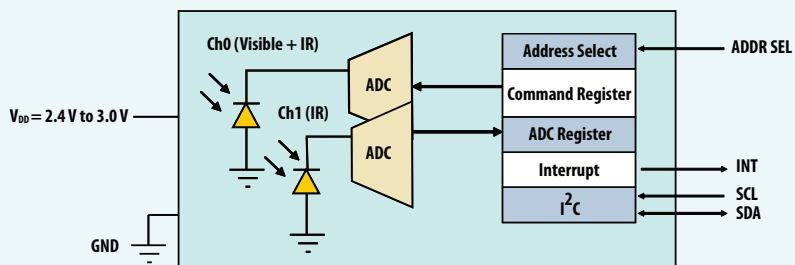
- Programmable interrupt function with user-defined threshold settings
- 16-Bit Digital Output with I²C Fast-Mode at 400 kHz
- Programmable Analog Gain and Integration Time
- Low 2.5-V Input Voltage and 1.8-V Digital Output
- Low Active Power (0.6 mW Typical) with Power Down Mode



Digital and Analog Ambient Light Sensors

| Part Number | Description | Output | Package | Pinout | Supply Voltage | Typ Output Current @ 100 Lux (μA) |
|---------------|---|---|---------------------------------|--------|----------------|-----------------------------------|
| APDS-9002-021 | Miniature Surface-Mount Ambient Light Photo Sensor | Analog, linearity across wide illumination range | ChipLED (2.00 x 1.25 x 0.80 mm) | 4 pins | 2.4 -5.5 V | 250 |
| APDS-9003-020 | Miniature Surface-Mount Ambient Light Photo Sensor | Analog, good linearity across wide illumination range, up to 10 K lux | ChipLED (1.60 x 1.50 x 0.55 mm) | 6 pins | 2.4 -5.5 V | 230 |
| APDS-9004-020 | Miniature Surface-Mount Ambient Light Photo Sensor – Reverse Mounting | Analog, good linearity across wide illumination range, up to 10 K lux | ChipLED (3.20 x 1.60 x 1.10 mm) | 4 pins | 2.4 -5.5 V | 230 |
| APDS-9005-020 | Miniature Surface-Mount Ambient Light Photo Sensor | Analog, very stable vs temperature and supply voltage, up to 10 K lux | ChipLED (1.60 x 1.50 x 0.55 mm) | 6 pins | 2.4 -5.5 V | 40 |
| APDS-9006-020 | Miniature Surface-Mount Ambient Light Photo Sensor – Reverse Mounting | Analog, very stable vs temperature and supply voltage, up to 10 K lux | ChipLED (3.20 x 1.60 x 1.10 mm) | 4 pins | 2.4 -5.5 V | 40 |
| APDS-9007-020 | Miniature Surface-Mount Ambient Light Photo Sensor with Logarithmic Current Output | Logarithmic output over a range of 3 lux to 70 K lux | ChipLED (2.40 x 2.00 x 0.80 mm) | 6 pins | 2.0 -3.6 V | 30 @ 1klux (logarithmic output) |
| APDS-9008-020 | Miniature Surface-Mount Ambient Light Photo Sensor | Analog, good linearity across wide illumination range | ChipLED (1.60 x 1.50 x 0.55 mm) | 6 pins | 1.6 -5.5 V | 40 |
| APDS-9300-020 | Miniature Surface-Mount Ambient Light Photo Sensor with Digital (I ² C) Output | 16-bit digital output with I ² C Fast- Mode at 400 kHz, up to 55 K lux | ChipLED (2.60 x 2.20 x 0.55 mm) | 6 pins | 2.4 -3.0 V | N/A |

APDS-9300 Functional Block Diagram





High CRI Mini High-Power LEDs

| Color | CRI | Flux [lm] | |
|---------------|-----|-------------|-------------|
| | | 350mA (typ) | 700mA (typ) |
| Cool White | 80 | 60 | 100 |
| Neutral White | 80 | 50 | 85 |
| Warm White | 90 | 45 | 75 |

The values shown in the above table are preliminary and subject to change.



3 Watt High-Power LEDs (to be released in early 2010)

| Product Number | Color | Luminous Flux at 350mA (typ.) | Luminous Flux at 700mA (typ.) | Max. Current | Viewing Angle | Electrically Isolated Metal Slug |
|----------------|---------------|-------------------------------|-------------------------------|--------------|---------------|----------------------------------|
| ASMT-AW31 | Cool White | 80lm | 140lm | 700mA | 130° | Yes |
| ASMT-AN31 | Neutral White | 80lm | 140lm | 700mA | 130° | Yes |
| ASMT-AY31 | Warm White | 65lm | 115lm | 700mA | 130° | Yes |
| ASMT-AA30 | Amber | 43lm | 80lm | 700mA | 130° | No |
| ASMT-AH30 | Red-Orange | 43lm | 80lm | 700mA | 130° | No |
| ASMT-AR30 | Red | 43lm | 80lm | 700mA | 130° | No |
| ASMT-AG31 | Green | 70lm | 120lm | 700mA | 130° | Yes |
| ASMT-AB31 | Blue | 18lm | 30lm | 700mA | 130° | Yes |
| ASMT-AL31 | Royal-Blue | 435mW | 650mW | 700mA | 130° | Yes |

The values shown in the above table are preliminary and subject to change.

About Avago Technologies

Avago Technologies is a leading supplier of analog interface components for communications, industrial and consumer applications. By leveraging its core competencies in III-V compound and silicon semiconductor design and processing, the company provides an extensive range of analog, mixed signal and optoelectronics components and subsystems to more than 40,000 customers. Backed by strong customer service support, the company's products serve four diverse end markets: industrial and automotive, wired infrastructure, wireless communications, and computer peripherals. Avago has a global employee presence and heritage of technical innovation dating back 40 years to its Hewlett-Packard roots. Information about Avago is available on the Web at www.avagotech.com

For product information and a complete list of distributors, please go to our web site and select "Find a Distributor" at:

www.avagotech.com
www.avagotech.com/led

For technical support please email a Technical Response Center in your region:

United States: support@avagotech.com

Europe: info@promotionteam.de

Asia Pacific: pacrim.components@avagotech.com