

SynJet® Spotlight Cooler 34W – Flush Mount

SynJet cooling technology provides the most reliable thermal management solution available. This LED cooler has been developed by Aavid for cooling tracklight, spotlight, and recessed downlight modules.

- Cools up to 34W⁴
- L10 of 100K Hours at 60°C
- Energy Efficient
- 5 yr Warranty
- Small Form Factor
- Quiet Acoustics



Specifications¹

Thermal & Acoustic

| SynJet Setting ² | Θs-a ³ | TDP ⁴ (W) | SPL (dBA) ⁵ | Wire Connections |
|-----------------------------|-------------------|----------------------|------------------------|---|
| High Performance | 0.91 | 33 | 28 | Red to +VDC Black & Blue to Ground |
| Mid Performance | 0.97 | 31 | 25 | Red to +VDC Black & Purple to Ground |
| Standard Performance | 1.07 | 28 | 22 | Red to +VDC Black only to Ground |
| PWM at 100% duty cycle | 0.91 | 34 | 28 | Red to +VDC Black only to Ground Blue to PWM Signal |
| Heatsink Only | 3.0 | 10 | N/A | N/A |

Electrical

| SynJet Setting ² | Voltage (VDC) +/- 10% | Current (mA) ⁶ | | | Pavg (mW) | Voltage (VDC) | Current (mA) ⁶ | | | Pavg (mW) |
|-----------------------------|-----------------------|---------------------------|------|-------|-----------|---------------|---------------------------|------|-------|-----------|
| | | Imin | Iavg | Ipeak | | | Imin | Iavg | Ipeak | |
| High Performance | 5 | 20 | 66 | 132 | 330 | 12 | 10 | 46 | 92 | 550 |
| Mid | | | 51 | 102 | 255 | | | 38 | 76 | 455 |
| Standard | | | 44 | 88 | 220 | | | 30 | 60 | 360 |
| PWM at 100% duty cycle | | | 66 | 132 | 330 | | | 46 | 92 | 550 |

Environmental

| All Settings | Min | Max | Units | Conditions |
|-----------------------------|-----|------|-------|------------------------------------|
| Operating Temperature | -40 | 70 | °C | Air temperature surrounding cooler |
| Storage Temperature | -50 | 85 | °C | Air temperature surrounding cooler |
| Storage Altitude | | 15K | m | Above sea level |
| Operating Relative Humidity | 5 | 95 | % | Non-condensing |
| Weight | | 300 | g | SynJet with heat sink |
| Reliability | | 100K | hrs | L10 @ 60°C |
| Regulatory Compliance | | | | RoHS, UL, FCC Part 15 Class B, CE |

¹ All values are typical at 25°C unless otherwise stated.

² The Level Select model should be used for discrete performance settings. Follow the instructions in the Product Design Guide for adjusting settings.

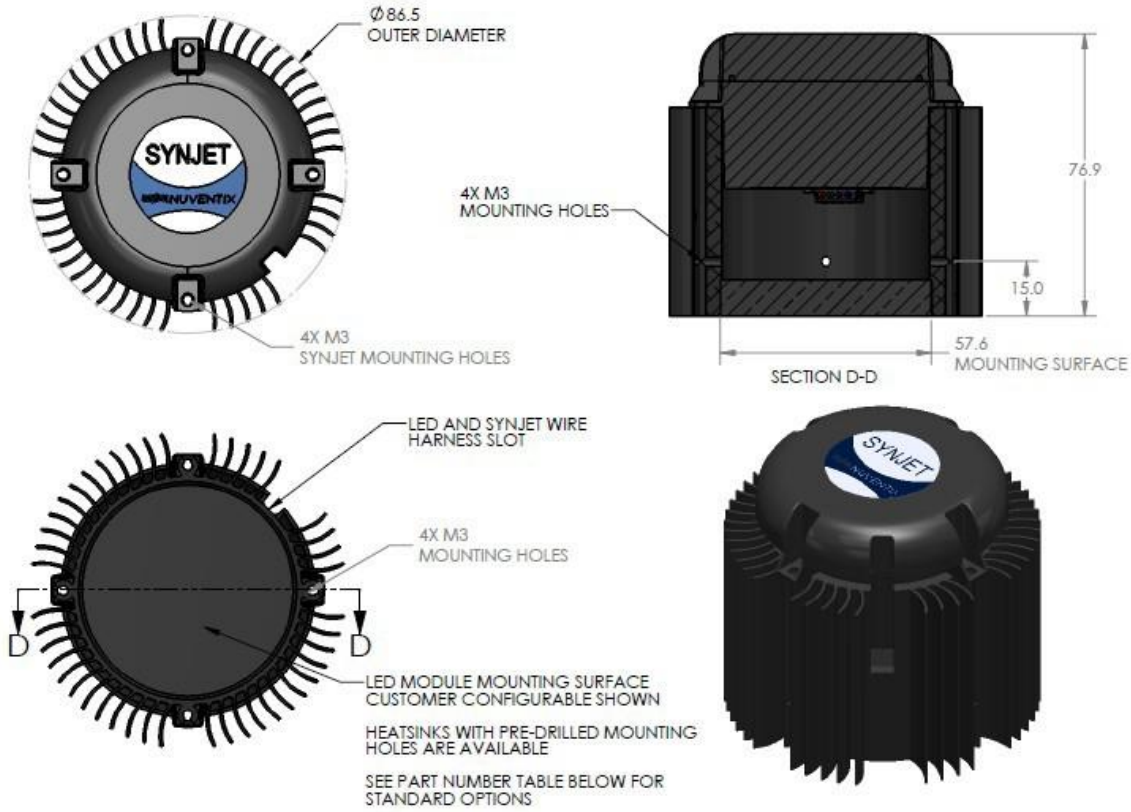
³ Thermal resistance values are given as reference only and are measured in free air without airflow obstructions. Thermal resistance is measured from the bottom middle of the heat sink to ambient air measured at the inlet to the SynJet, with a heat source at least 19cm² using the 34W spot cooler reference heat sink. Actual thermal performance may vary by application and final product design should be tested to assure proper thermal performance.

⁴ Thermal Design Power is based on a 30°C temperature rise of heat sink mounting surface above ambient temperature around cooler.

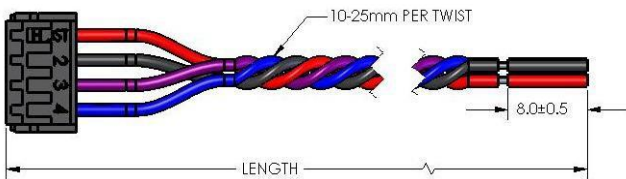
⁵ Sound Pressure Level is measured at 1 meter distance per ISO 7779.

⁶ The SynJet has a time varying current. The current waveform is sinusoidal and the average current (Iavg) is used to calculate the average power consumption (Pavg) at nominal input voltage (VDC). See the Electrical section in the Product Design Guide for a detailed explanation.

Mechanical
SynJet Cooling Solution shown with HSLC-CALBL-022



SynJet Wire Harness



Connector Pinout

| Pin | Wire Color | Symbol | Description |
|-----|------------|--------|---|
| 1 | Red | +VDC | 5 V or 12 V depending on model |
| 2 | Black | GND | Ground |
| 3 | Purple | CTRL2 | Input for Level Select model Status signal for PWM model |
| 4 | Blue | CTRL1 | Input for Level Select model PWM input for PWM model |

IMPORTANT: SynJets should be completely wired to the power supply before the power supply is energized. The power supply should be turned off before the SynJet Cooler is disconnected. SynJet Coolers are not designed for “hot swap” or “hot plug” applications.

Part Numbers

| Part Number | Description | Notes |
|-----------------|---|---|
| SSLCS-CM005-001 | SynJet, ZFlow 75, PWM, 5V, Black | Use PWM input to control performance setting |
| SSLCS-CM005-002 | SynJet, ZFlow 75, Level Select, 5V, Black | Hard wired performance settings |
| SSLCS-CM012-001 | SynJet, ZFlow 75, PWM, 12V, Black | Use PWM input to control performance setting |
| SSLCS-CM012-002 | SynJet, ZFlow 75, Level Select, 12V, Black | Hard wired performance settings |
| HSLCS-CALBL-020 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Philips SLM, Vossloh-Schwabe, Black | Has mounting holes for Philips SLM or Vossloh-Schwabe |
| HSLCS-CALBL-021 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Osram PrevaLED, Black | Has mounting holes for Osram PrevaLED |
| HSLCS-CALBL-022 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Configurable, Black | Mounting surface does not have mounting holes |
| HSLCS-CALBL-023 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Bridgelux ES, Black | Has mounting holes for Bridgelux ES |
| HSLCS-CALBL-024 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Xicato XSM, Black | Has mounting holes for Xicato XSM |
| HSLCS-CALBL-025 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Zhaga B3, Black | Has mounting holes for Zhaga Standard |
| HSLCS-CALBL-027 | Heatsink, 34W, Spotlight Cooler, Flush Mount, Lumileds Luxeon K, Black | Has mounting holes for Luxeon K 8-24 die |
| WALLS-C4150-001 | Wire Harness, 4-Wire, 150 mm Length | Contact sales for other lengths |
| WALLS-C4600-001 | Wire Harness, 4-Wire, 600 mm Length | Contact sales for other lengths |

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