

Top Mounted Cooler with Heatsink

Features/Benefits

- Covers all your Low Profile Chip cooling needs
- Thermal loads from 10 to nearly 20W
- Low acoustic sound sensitive applications
- Ultra-low power
- Very low profile applications
- 100K hours L10 life at 60C



Overview

Ntelligence™ fan-less air moving technology provides the most reliable active cooling solution available today. The Low Profile Ntelligence™ cooling modules JARO Thermal can be integrated with a wide array of thermal needs.

Specifications

Parameter	Os-a ¹²³	SPL (dBA) ⁴	TDP ⁵ (W)	Power W (5V) ⁶
Top Mount – High Performance, 20W Cooler	2.1	35	19	1.1
Top Mount – Standard, 15W Cooler	3.0	25	13	0.9
Top Mount – Low Power, 13W Cooler	3.5	22	11.5	0.5
Top Mount – Silent, 10W Cooler	4	19	10	0.7

Parameter – All Modules	Min	Typ	Max	Units	Conditions
Voltage ⁶	4.75		5.25	VDC	150mV max ripple p-p
Power Lead					Power (Red wire) Ground (Black wire)
Operating Temperature	0		60	°C	
Storage Temperature	-40		75	°C	
Storage Altitude			10K	m	Above Sea Level
Relative Humidity (operating)	5		95	%	Non-condensing
Weight			155	gr	With Cu heat sink
Agency Certifications					CE, UL, RoHS
Reliability ⁷			100K	hrs	L10 @ 60C

¹ In fully open air or well vented fixtures from 25C to 60C in full on condition with Cu heatsink. Thermal data is given as a reference only. Actual performance may vary by application.

² Thermal resistance is measured from the bottom middle of the heat sink, with a heat source at least 15cm², to ambient air measured at the inlet to the Ntelligence.

³ Ntelligence Cooler is suitable for enclosed fixtures but thermal performance will vary depending on the enclosure

⁴ Per ISO 7779

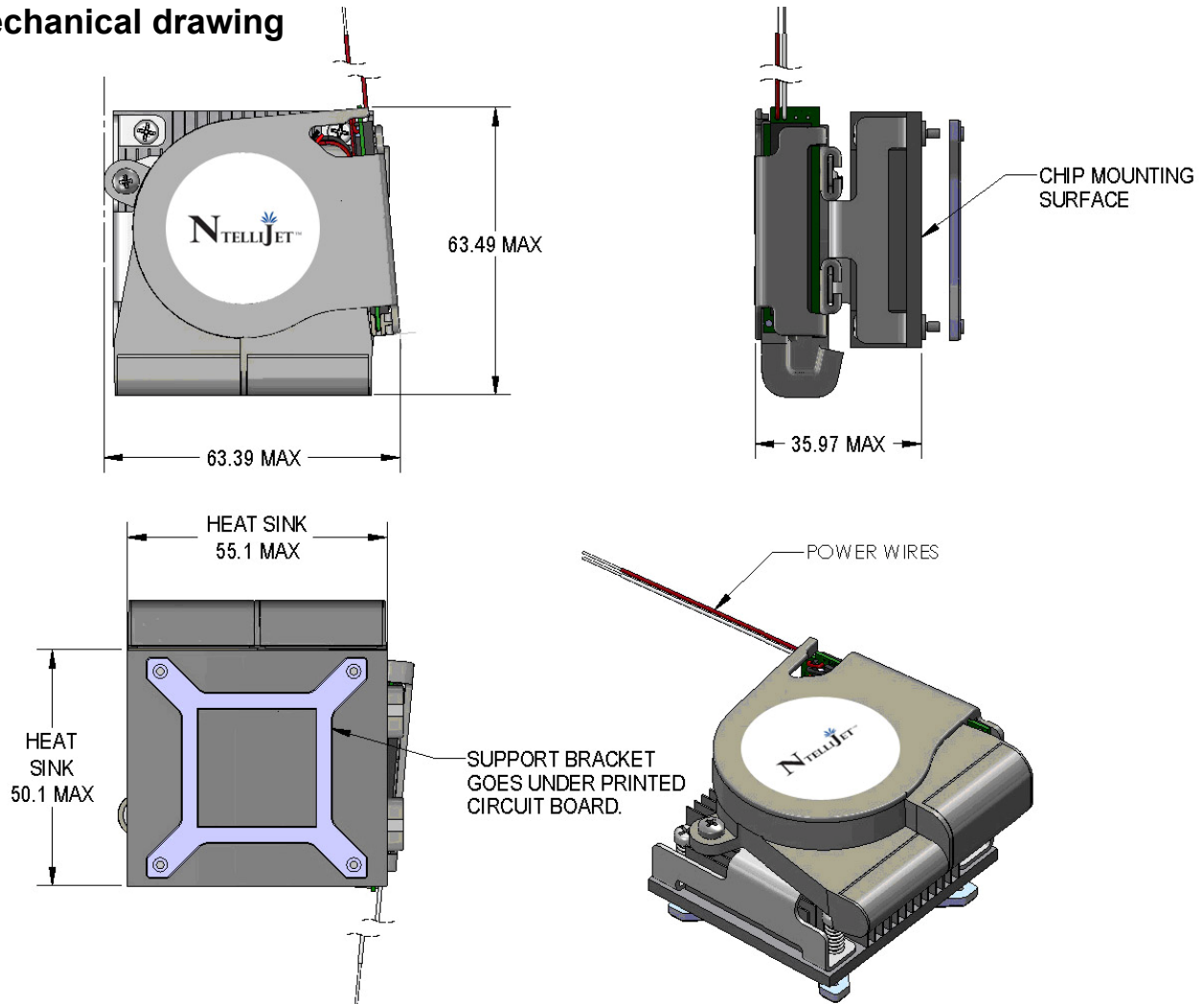
⁵ Total Design Power based on a 40°C delta in temperature

⁶ See JARO Thermal's Design Guide for detailed power requirements

⁷ L10 is the life for which 90% of a group of modules will exceed the specified life



Mechanical drawing



Part Numbers

Top Mount	Document revision: 2.4
NJ-TM0515	Ntelligence™, Top Mount Chip Cooler 5v – Standard, 15W Cooler
NJ-TM0520	Ntelligence™, Top Mount Chip Cooler 5v – HP 20W, Cooler
NJ-TM0510	Ntelligence™, Top Mount Chip Cooler 5v – S 10W, Cooler
NJ-TM0513	Ntelligence™, Top Mount Chip Cooler 5v – LP 13W, Cooler
NJ-TMAL	Top Mount Chip Cooler, Heatsink, Al
NJ-TMCU	Top Mount Chip Cooler, Heatsink, Cu

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