



Cooling Solutions

Aavid Thermalloy is ready to guide customers through thermal design issues from concept to production with solutions that provide a competitive advantage. With a wide selection of standard products, Aavid Thermalloy provides fast access to cooling solutions for the new generation of LED light sources. Standard products are easily configured for rapid prototyping and our global footprint delivers the integrated solution cost effectively.



Extruded 637303B03000G

Features ▶

Stamping

- Lightweight
- Variety of fin configurations

Pin Fin

- Fin array allows airflow in any direction
- Compact size
- Available with pre-applied thermal tape

Extrusion

- Highly configurable
- Low thermal resistance

Benefits ▶

Stamping

- Requires minimal structural support
- Use with natural or forced convection airflow
- Can support high-volume production

Pin Fin

- Excellent forced convection cooling
- Reduced space requirement
- Simple assembly

Extrusion

- Can incorporate structural and aesthetic elements
- Cools multiple devices

Applications ▶

Stamping

- Commercial lighting
- Signals
- Transportation

Pin Fin

- Commercial lighting
- Signals
- Transportation

Extrusion

- Commercial lighting
- Signals
- Transportation

Product Specifications ▶

Part Number	Type	Shape	LED Wattage (W)	Material Type	Thermal Expansion ($10^{-6}\text{m/m/}^{\circ}\text{K}$)	Thermal Conductivity ($\text{W/m}\cdot^{\circ}\text{K}$)	Thermal Impedance ($^{\circ}\text{C/W}$)	Size L x W x H (mm)	LED Surface Area (mm^2)	Volume (mm^3)	Markets
500400B0000G	Stampings	Square	10	Al-1100	23.6	220	5.0	46 x 46 x 32	2,116	67,712	CL TR BL SI
569000B0000G		Square	9	Al-1100	23.6	220	5.5	46 x 46 x 33	2,116	69,828	CL TR BL SI
373024B00000G	Pin fin	Square	2	Al-6063	23.4	209	33.3	28 x 28 x 9	784	7,056	CL TR BL SI
371824B00000G		Square	2	Al-6063	23.4	209	31.9	35 x 35 x 7	1,225	8,575	CL TR BL SI
364424B00000G		Square	3	Al-6063	23.4	209	18.4	40 x 40 x 11	1,600	18,240	CL TR BL SI
374424B00035G	Pin fin/thermal tape	Square	2	Al-6063	23.4	209	20.3	27 x 27 x 18	729	13,122	CL TR BL SI
375024B00032G		Square	4	Al-6063	23.4	209	12.2	40 x 40 x 18	1,600	28,800	CL TR BL SI
374724B00032G		Square	3	Al-6063	23.4	209	15.3	35 x 35 x 18	1,225	22,050	CL TR BL SI
637303B03000G	Extruded sink	Square	27	Al-6063	23.4	209	1.8	76 x 76 x 57	5,776	329,232	CL TR BL SI
766203B04000G		Square	28	Al-6063	23.4	209	1.8	102 x 102 x 32	10,404	332,928	CL TR BL SI
601403B06000G		Square	51	Al-6063	23.4	209	1.0	154 x 154 x 44	23,716	1,043,504	CL TR BL SI
656053B07000G		Square	106	Al-6063	23.4	209	0.5	177 x 177 x 71	31,329	2,224,359	CL TR BL SI

MARKETS LEGEND

CL COMMERCIAL LIGHTING

FL FLASHLIGHTS

TR TRANSPORTATION

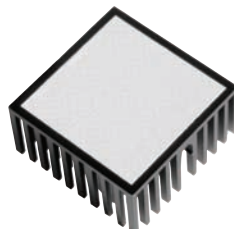
BL BACKLIGHTING

SI SIGNAGE

Contact Arrow for samples



Stamped 569000B00000G



Pin fin/thermal tape
374724B00032G



Extruded 766203B04000G

Integrated Temperature Sensors, Switches, and Fan Controllers

Texas Instruments offers high-accuracy, low-power temperature sensors specified for operation from -40 degrees Celsius to +125 degrees Celsius. Designed for cost-effective thermal management solutions, TI temperature sensors like the TMP102 feature precision for digital temperature sensors which offer +0.5 degrees Celsius (typical) true to 12-bit accuracy, and 1.4V operation in micro-packaging. The TMP300 analog temperature switch offers flexibility for PWM applications designed for reduced power dissipation. As lighting solutions increase demand for tighter thermal management and reduced power dissipation, TI temperature sensors bring performance, low power, and micro-packaging to innovative next-generation designs.

Features ▶

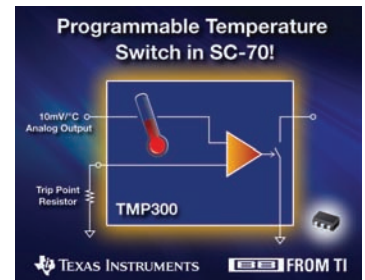
- Highest level of digital temperature sensor accuracy and wide range of package options
- Flexible programmability including over- and under-temperature thresholds, alarm functions, and measurement resolution
- Broad portfolio of digital temperature sensors, remote temperature sensors, temperature switches, and fan controllers

Benefits ▶

- Maximize power dissipation control in thermal management designs
- Increase system reliability and longevity
- Simplify design process and reduce time to market

Applications ▶

- Entertainment lighting
- Architectural lighting
- Signage
- LCD displays



TMP300 analog temperature switch

Product Specifications ▶

Part Number	Type	Description	Accuracy Over Temp. Range (°C)	Specified Temp. Range (°C)	Operating Temp. Range (°C)	Resolution (bits)	Supply Voltage (V)	Supply Current (µA)	Smallest Package	Markets
TMP100	Digital I ² C/SM bus	Digital temperature sensor	2 3	-25 to +85 -55 to +125	-55 to +125	9-12	2.7-5.5	45	SOT23-6	CL
TMP102		Ultra-low power digital temperature sensor in micro-surface-mount package	2 3	-25 to +85 -55 to +125	-55 to +150	12	1.4-3.6	7	SOT563-6	BL SI
TMP275		Ultra-high accuracy digital temperature sensor	0.5 1	+10 to +85 -40 to +125	-55 to +127	9-12	2.7-5.5	50	MSOP-8	SI
TMP75		Industry standard sensor w/2-wire interface	2.0 3.0	-25 to +85 -40 to +125	-55 to +127	9-12	2.7-5.5	50	MSOP-8	CL
TMP123	Digital SPI interface	Digital temperature sensor w/SPI interface	1.5 2	-25 to +85 -55 to +125	-55 to +150	12	2.7-5.5	35	SOT23-6	CL
TMP300	Analog switch	Comparator-output temperature switch w/additional analog output	±2	-40 to +125	-40 to +150	Output: 10 mV/°C	1.8-18	110	SC70-6	CL
AMC6821	Fan controller	±1°C remote and local temperature sensors w/integrated fan controllers	±1	-40 to +125	-40 to +150	Output: programmable PWM	2.7-5.5	2 mA	SOP-16	CL SI

MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE



This Arrow sponsored Texas Instruments Analog eLab™ Videocast series partners with Cree, a leader in high-brightness and lighting-class LEDs, and focuses on solid-state lighting along with specific applications like solar powered lighting, cove lighting, and MR16 lamp replacement. Visit www.arrow.com/TIeLabsCree for the latest video; there will be a new videocast launched each week.