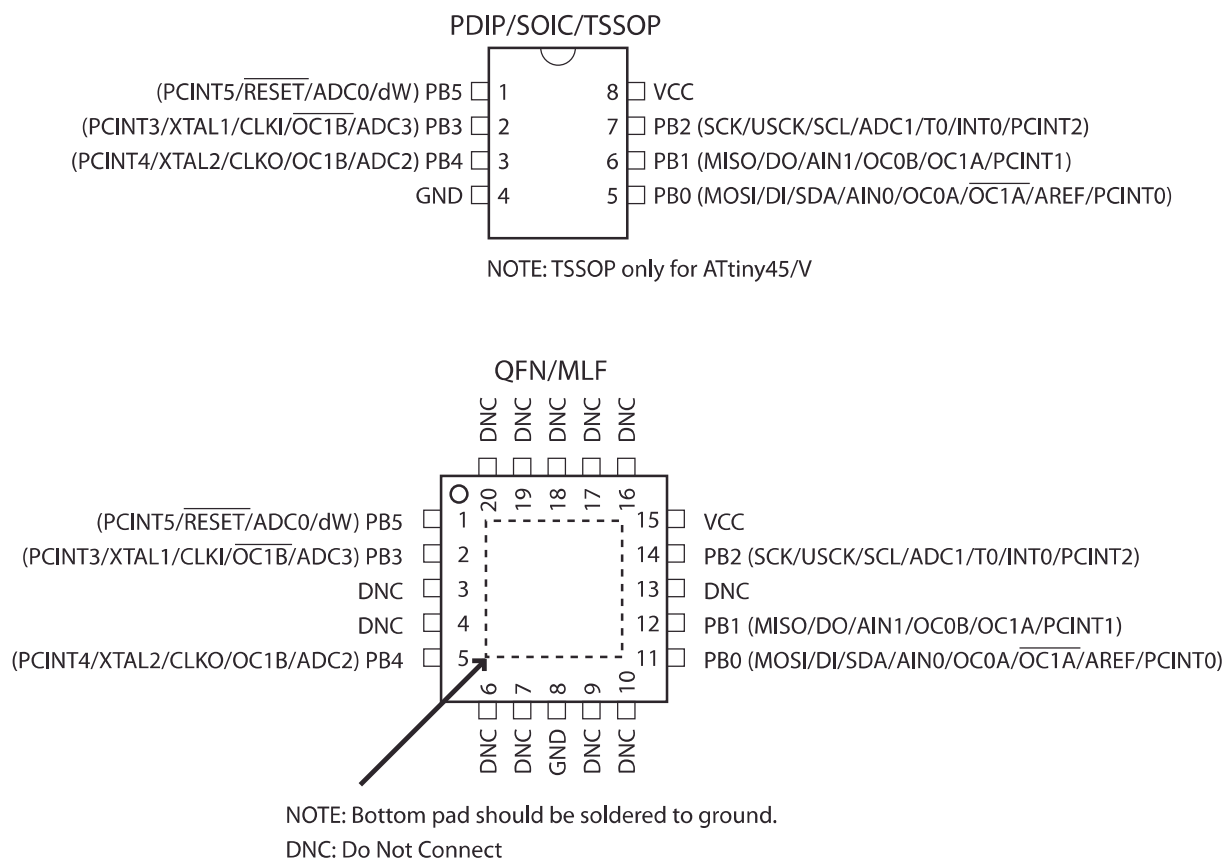


1. Pin Configurations [SOIC-8 PACKAGE]

Figure 1-1. Pinout ATtiny25/45/85



1.1 Pin Descriptions

1.1.1 VCC

Supply voltage.

1.1.2 GND

Ground.

1.1.3 Port B (PB5:PB0)

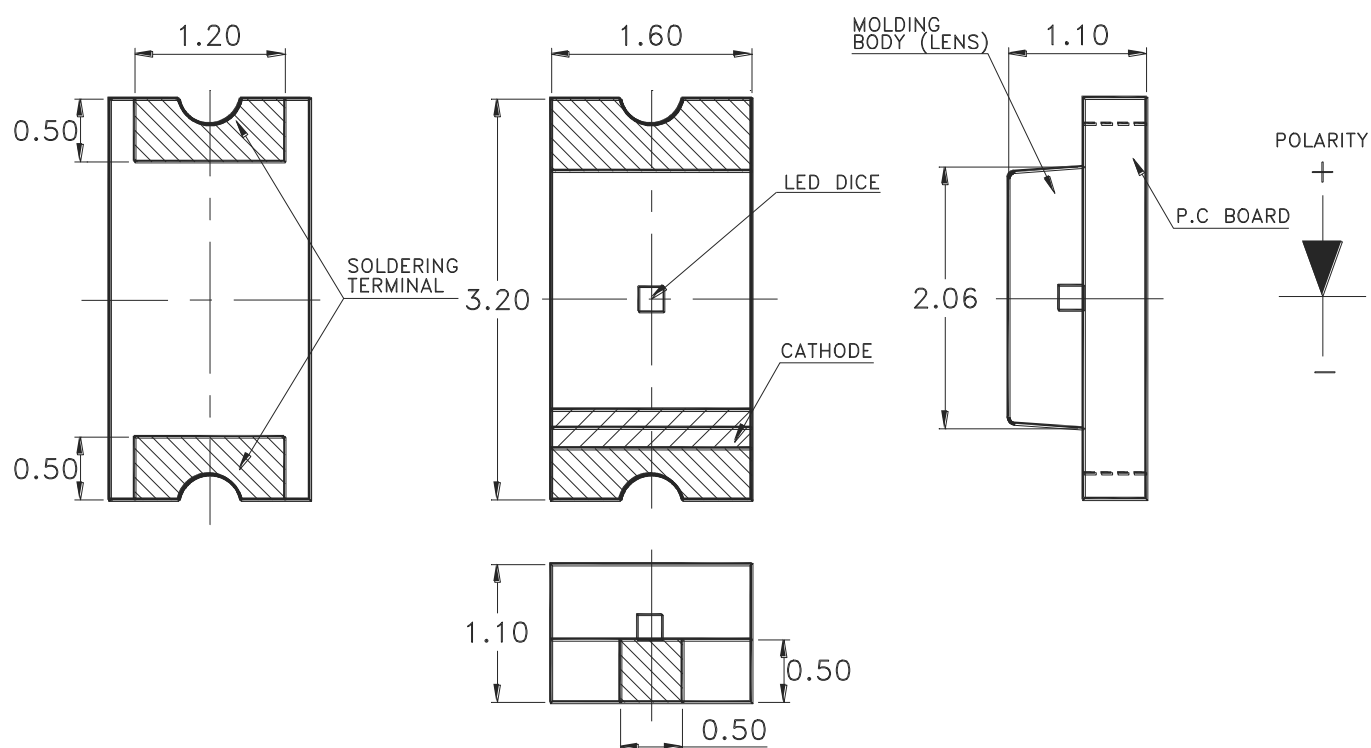
Port B is a 6-bit bi-directional I/O port with internal pull-up resistors (selected for each bit). The Port B output buffers have symmetrical drive characteristics with both high sink and source capability. As inputs, Port B pins that are externally pulled low will source current if the pull-up resistors are activated. The Port B pins are tri-stated when a reset condition becomes active, even if the clock is not running.

Features

- * Meet ROHS.
- * Ultra Bright AlInGaP Dice Chip LED.
- * Package In 8mm Tape On 7" Diameter Reels.
- * EIA STD package.
- * I.C. compatible.
- * Compatible With Automatic Placement Equipment.
- * Compatible With Infrared Reflow Solder Process.

[1206 PACKAGE]

Package Dimensions



Part No.	Lens	Source Color
LTST-C150KRKT	Water Clear	AlInGaP Red

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.10 mm (.004") unless otherwise noted.

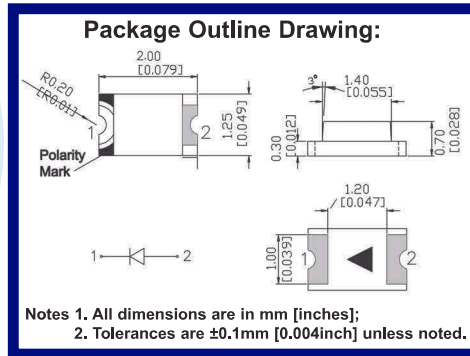
[0805 PACKAGE]

Dialight

Micro LED® SMD LED

“598 SERIES” 0805 PACKAGE

(2.0mm X 1.25mm X 0.7mm) Single Color



FEATURES / BENEFITS

- ▲ Compatible with automatic placement equipment
- ▲ RoHS compliant
- ▲ Packaged in 8mm tape, 7" reel and 20 per strip
- ▲ Meets EIA-481-1 pkg. std.

ORDERING INFORMATION

5 9 8 - 8 1 1 0 - 1 0 7 F													
Packaging Option													
2		20 pieces on tape											
7		7" reel 3000pcs / reel											

PART NUMBERS

DIALIGHT P/N	EMITTED COLOR	MATERIAL	LENS COLOR	LUMINOUS INTENSITY			DOMINANT WAVELENGTH			FORWARD VOLTAGE			VIEWING ANGLE
				If = 20 ma			If = 20 ma			If = 20 ma			° DEGREES
				MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
598-8110-107F	RED	AlInGaP	Water Clear	30	40	80	630	635	642	1.7	2.2	2.4	140
598-8120-107F	RED-ORANGE	AlInGaP	Water Clear	120	150	200	620	625	630	1.7	2	2.4	140
598-8130-107F	ORANGE	AlInGaP	Water Clear	70	-	150	600	-	610	1.7	2	2.4	140
598-8140-107F	YELLOW	AlInGaP	Water Clear	100	130	160	590	-	595	1.7	2	2.4	140
598-8150-107F	YELLOW	AlInGaP	Water Clear	100	130	160	583	-	590	1.7	2	2.4	140
598-8160-107F	YELLOW-GREEN	AlInGaP	Water Clear	20	40	60	570	-	575	1.8	2	2.4	140
598-8170-107F	GREEN	GaP	Water Clear	10	20	40	562	-	570	1.8	2	2.4	140
598-8180-107F	GREEN	InGaP	Water Clear	150	220	300	520	523	525	3	3.2	3.5	140
598-8181-107F	GREEN	InGaP	Water Clear	220	300	400	520	523	525	3	3.2	3.5	140
598-8190-107F	BLUE	InGaP	Water Clear	60	90	140	470	473	475	2.8	3.2	3.5	140
598-8191-107F	BLUE	InGaP	Water Clear	90	140	160	470	473	475	2.8	3.2	3.5	140

ABSOLUTE RATINGS (@ Ta = 25°C)

DIALIGHT P/N	Power Dissipation	Forward Current	Reverse Voltage	Operating Temperature Range	Storage Temperature Range	Peak Pulse Forward Current	Electrostatic Discharge
	(mW)	(mA)	(V)	(°C)	(°C)	(mA)	(HBM)
598-8110-107F	60	25	5	-30~+85	-40~+100	100	2000
598-8120-107F	60	25	5	-30~+85	-40~+100	100	2000
598-8130-107F	55	25	5	-30~+85	-40~+100	100	2000
598-8140-107F	55	25	5	-30~+85	-40~+100	100	2000
598-8150-107F	55	25	5	-30~+85	-40~+100	100	2000
598-8160-107F	60	25	5	-30~+85	-40~+100	100	2000
598-8170-107F	60	25	5	-30~+85	-40~+100	100	2000
598-8180-107F	87.5	25	5	-30~+85	-40~+100	100	1000
598-8181-107F	87.5	25	5	-30~+85	-40~+100	100	2000
598-8190-107F	87.5	25	5	-30~+85	-40~+100	100	1000
598-8191-107F	87.5	25	5	-30~+85	-40~+100	100	1000

Dialight Corporation

1501 Route 34 South • Farmingdale, NJ 07727 USA

Tel: (1) 732-919-3119 • Fax: (1) 732-751-5778 • www.dialight.com



A4703



ISO 9001



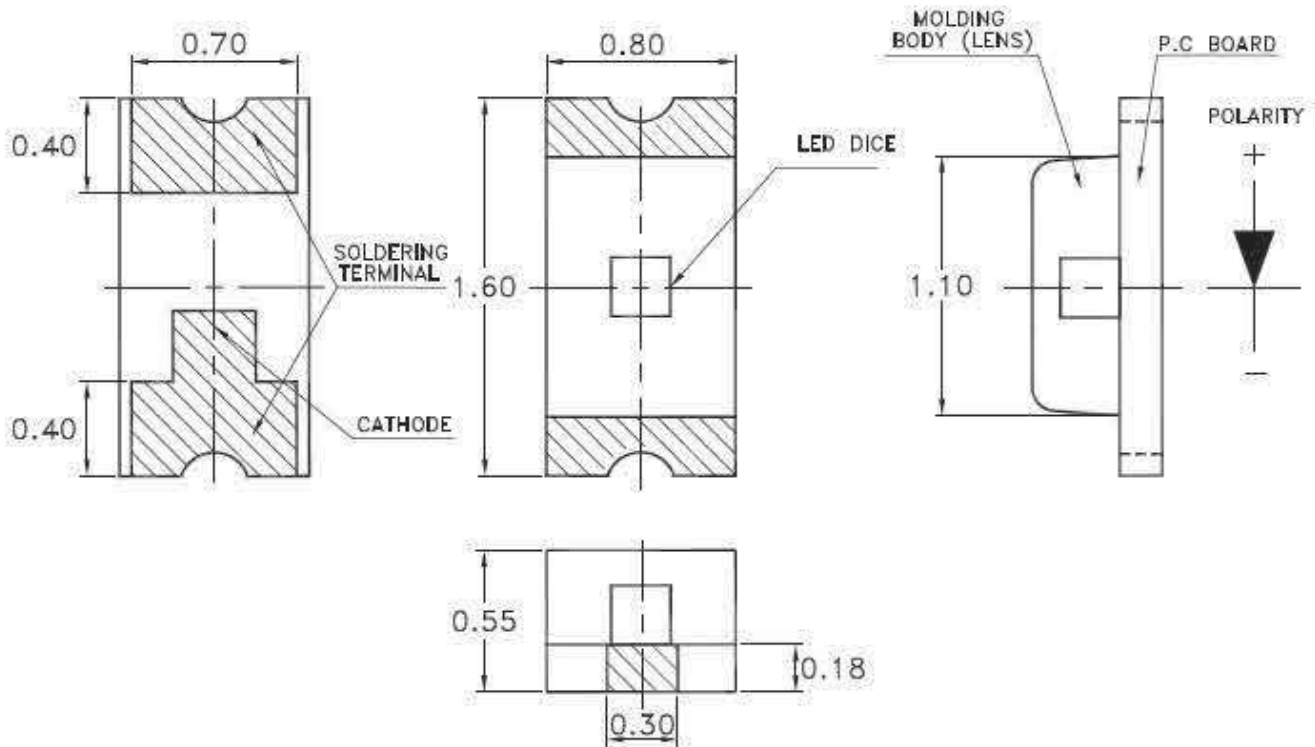
MDIEI5980805_A

Features

- * Meet ROHS, Green Product.
- * Super Thin (0.55H mm) Chip LED.
- * Ultra Bright AlInGaP Chip LED.
- * Package In 8mm Tape On 7" Diameter Reels.
- * EIA STD package.
- * I.C. compatible.
- * Compatible With Automatic Placement Equipment.
- * Compatible With Infrared And Vapor Phase Reflow Solder Process.

[0603 PACKAGE]

Package Dimensions



Part No.	Lens	Source Color
LTST-C191KSKT	Water Clear	AlInGaP Yellow

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.10 mm (.004") unless otherwise noted.

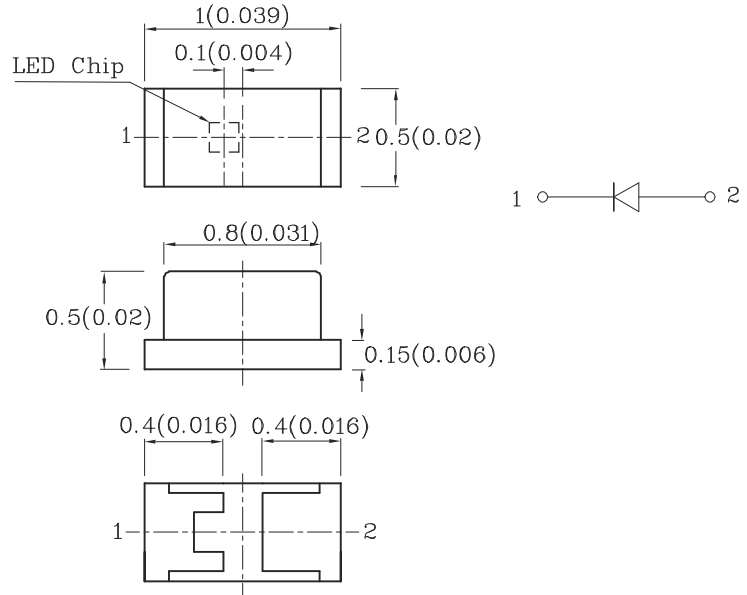
Features

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Package Schematics



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T _A =25°C)		Green (AlGaInP)	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i _{FS}	150	mA
Power Dissipation	P _D	75	mW
Operating Temperature	T _A	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +85	

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

Operating Characteristics (T _A =25°C)		Green (AlGaInP)	Unit
Forward Voltage (Typ.) (I _F =20mA)	V _F	2.1	V
Forward Voltage (Max.) (I _F =20mA)	V _F	2.5	V
Reverse Current (Max.) (V _R =5V)	I _R	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =20mA)	λ _P	574*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I _F =20mA)	λ _D	570*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA)	Δλ	20	nm
Capacitance (Typ.) (V _F =0V, f=1MHz)	C	15	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I _F =20mA) mcd		Wavelength CIE127-2007* nm λ _P	Viewing Angle 2θ 1/2
				min.	typ.		
XZVG68W-2	Green	AlGaInP	Water Clear	20*	49*	574*	120°

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.



APG0603PBC-TT-5MAV

0.65 x 0.35 x 0.2 mm SMD Chip LED Lamp

DESCRIPTIONS

- The Blue source color devices are made with InGaN on SiC substrate Light Emitting Diode
- Electrostatic discharge and power surge could damage the LEDs
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs
- All devices, equipments and machineries must be electrically grounded

FEATURES

- 0.65 mm x 0.35 mm SMD LED, 0.2 mm thickness
- Low power consumption
- Wide viewing angle
- Compatible with automatic placement equipment
- Package: 4000 pcs / reel
- Moisture sensitivity level: 2
- RoHS compliant

APPLICATIONS

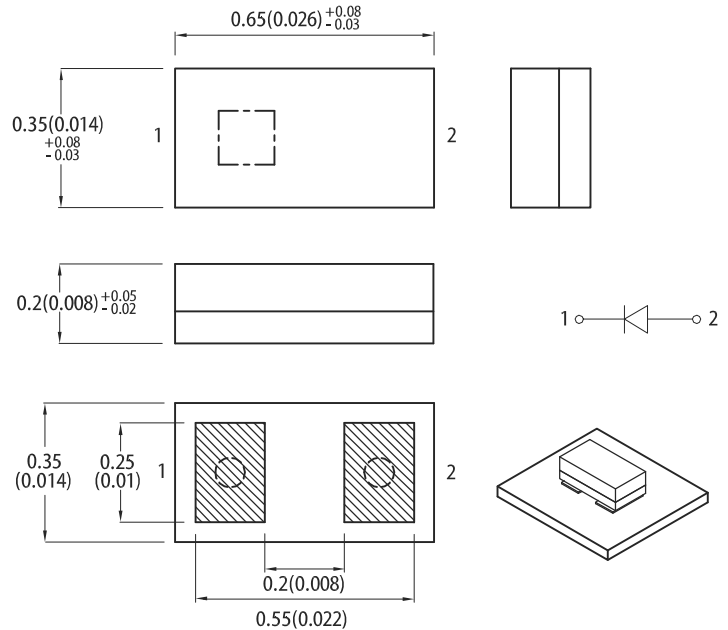
- Backlight
- Status indicator
- Home and smart appliances
- Wearable and portable devices
- Healthcare applications

ATTENTION

Observe precautions for handling electrostatic discharge sensitive devices

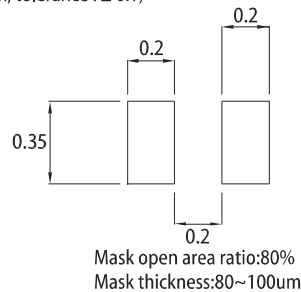


PACKAGE DIMENSIONS



RECOMMENDED SOLDERING PATTERN

(units : mm; tolerance : ± 0.1)



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 5mA ^[2]		Viewing Angle ^[1]
			Min.	Typ.	2θ1/2
APG0603PBC-TT-5MAV	Blue (InGaN)	Water Clear	15	25	140°

Notes:
 1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
 2. Luminous intensity / luminous flux: $\pm 15\%$.
 3. Luminous intensity value is traceable to CIE127-2007 standards.