

CTH Series Capacitive Touch Sensor Display 15.0 x 15.0 x 11.0 mm



CTHS15CIC05 - Pure Green Capacitive Touch Sensor Through Hole with a Display Size of 0.59 x 0.59 inches (15 x 15 mm) square



Applications

- Mobile communication devices
- Electronic devices
- Point of sale Terminals
- Gaming
- Industrial control displays

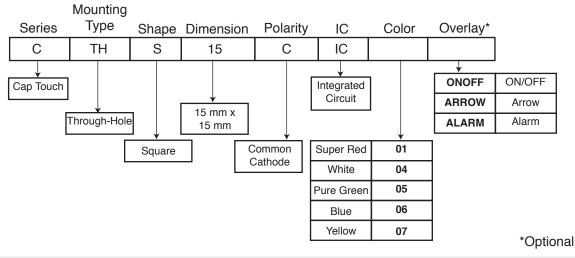
- Touch Screen Monitors
- Portable Instruments
- Media Players
- Medical devices
- Appliances and consumer equipments

Key Features

- Integrated touch sensing and display technology
- · Enables the device interface to be more user friendly and intuitive
- Mounting type: through hole (industry standard pitch 0.100")
- Available in one standard size: 15.0mm x 15.00mm x 11.00mm
- · Available in 5 colors: super red, white, pure green, blue or yellow
- Touch sensor: integrated circuit (IC)
- Uniform illumination and high optical clarity due to LED technology
- · Robust design due to no mechanical moving parts
- · Simplifies devices design and manufacturability
- · Optional overlay (icons): on/off, arrow, alarm
- · Custom overlay icon can be manufactured upon request contact VCC
- · Compliant with RoHS and REACH requirements
- · Capacitive sensor still functional when hands are wet
- · Capacitive sensor still functional when hands are covered with certain types of gloves

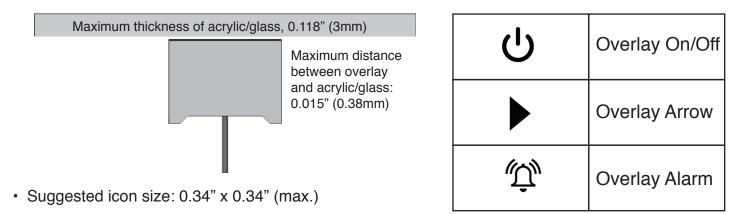
Ordering Data

The CTH Series (Cap Touch) is available in a range of standard features and options. To specify your Cap Touch Display, simply choose one option from each column.



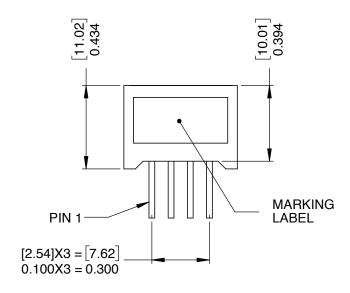
Overlay

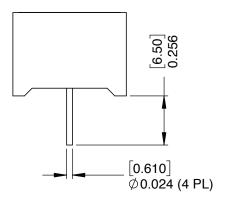
- Different LED colors can indicate the mode in which an electronic device is operating, depending on the icon associated with it.
- Optional graphic overlay made with polished LEXAN[™] Polycarbonate 8010 Film 0.007" (0.175 mm) thick has reverse printed translucent white icon, in order to still see it even when the back lighting is off.
- Lexan 8010 is a transparent polycarbonate film and offers hardness, chemical and abrasion resistance, stiffness, and high temperature capability.
- · Adhesive: 3 M waterclear
- Three standard icons are available: alarm, arrow and on-off. Custom icons are also available upon request.
- Capacitive Touch Display can also be mounted behind clear glass or plastic layer such as polycarbonate or acrylic, as shown in the picture below.
- Suggested overlay size: 0.590" x 0.590"

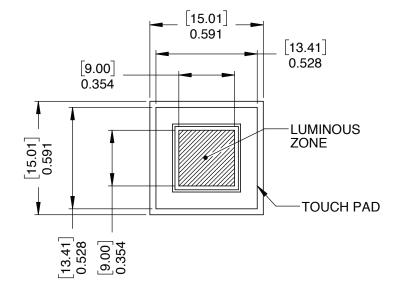


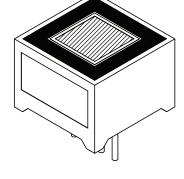
the first call for illuminated components

Package Dimensions





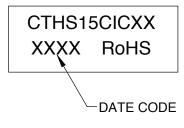




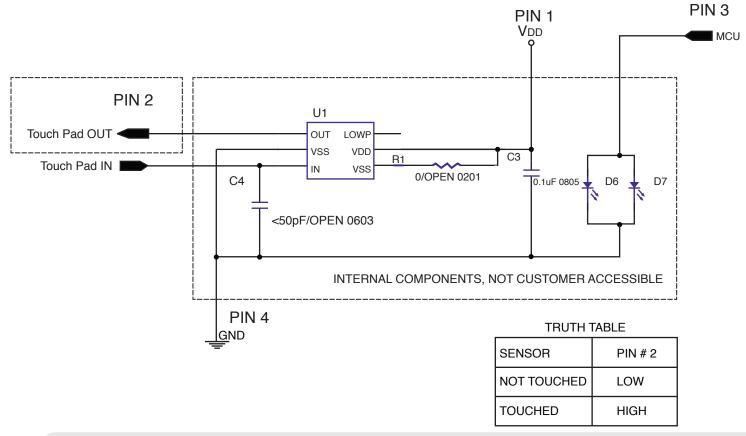
Dimensions in [mm] inches General tolerances unless otherwise specified:

	inches	mm
.X	± .020	±.508
.XX	±.010	±.254
.XXX	±.005	±.127

MARKING LABEL INFO



Internal Circuit Diagram



Internal IC Electrical Characteristics

(TA = 25°C,	unless	otherwise	sp	ecified)
	17.200,	uni0000	0110110100	·υρ	

Symbol	Parameter	Condition	Min.	Тур.	Max.	Units.	
Vdd	Supply Voltage (Pin#1)		2.0		5.5	V	
VIH	High Level Input Voltage	@ VDD = 5V	0.7Vdd		Vdd	V	
VIL	Low Level Input Voltage	@ VDD = 5V			0.3Vdd	V	
IDD1	Operating Current	@ VDD = $5V$, no load		16		μΑ	
		@ VDD = 3V , no load		3.5			
IDD2	Operating Current	@ VDD = 5V , no load		10.5		μA	
	(SLRT=VDD)	@ VDD = 3V , no load		2.5		μ/	
IOL	Low Level Output Current (Pin#2)	@ VDD = 3V, VOL = 1V		30		mA	
ЮН	High Level Output Current (Pin#2)	@ VDD = 3V, VOL = 2V		8		mA	

the first call for illuminated components

ABSOLUTE MAXIMUM RATING FOR LED

(Ta=25°C)

Parameter	Symbol	Rating	Unit	
		Pure Green		
Power Dissipation Per LED	PAD	114	mW	
Derating Liner from 25°C per LED	-	0.4	mA/°C	
Continuous Forward Current Per LED	IAF	30	mA	
Peak Current Per LED (duty cycle 1/10,1KHz)	IPF	100	mA	
Reverse Voltage Per LED	VR	5	V	
Operating Temp.	Topr	-35 ~ +85	°C	
Storage Temp.	Tstg	-35 ~ +85	°C	

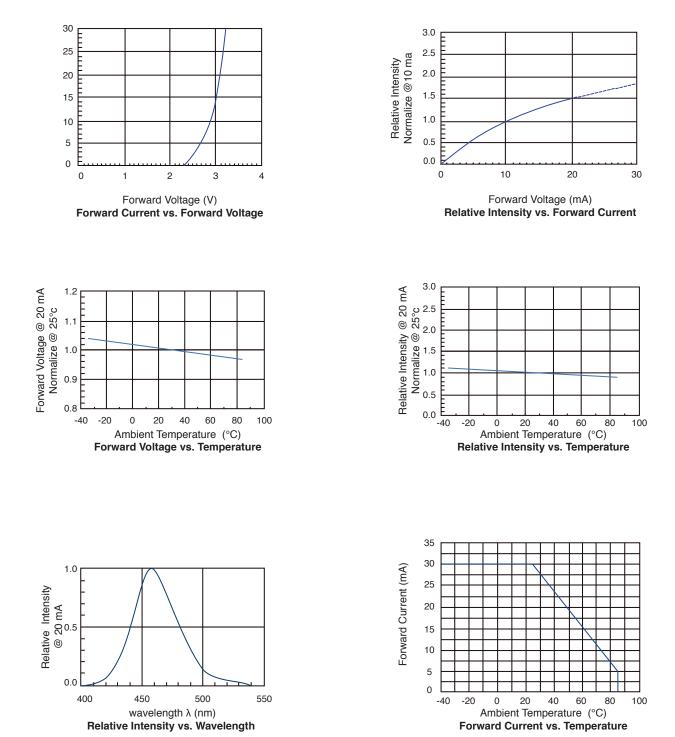
ELECTRO-OPTICAL CHARACTERISTICS

Parameter Symbol Min. Max. Unit Condition Тур. Luminous Intensity lv 289 612 I⊧ = 20 mA --mcd Forward Voltage VF 3.2 3.8 V I⊧ = 20 mA ---Peak Emission Wavelength λP I⊧ = 20 mA -----nm **Dominant Wavelength** λD 525 I⊧ = 20 mA ---nm 30 I⊧ = 20 mA Spectrum Radiation Bandwidth Δλ -----nm Luminous Intensity Matching Ratio V-M 2:1 l⊧ = 10 mA -----**Reverse Current** IR 50 $V_{R} = 5V$ μA

(Ta=25°C)

ELECTRICAL/OPTICAL CHARACTERISTICES CURVES

(Ta=25°C)



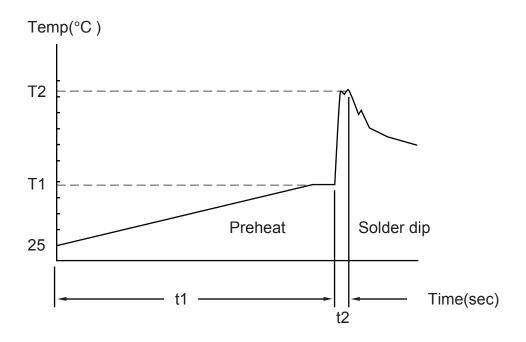
Product Specifications

SOLDERING CONDITIONS

1. Wave Soldering Profile

Distance: 1.6mm min (From Seating Plane)

Item	Condition		Note
Preheat	Temperature T1	80 – 120 °C	PWB Temperature
Fielleat	Time t1	60 – 180sec	(Soldering Side Surface)
Solder Dip	Temperature T2	230 – 260°C	Bath Temperature
	Time t2	2 – 4 sec	Solder Tank Passage Time



2. Hand Soldering (Iron Condition)

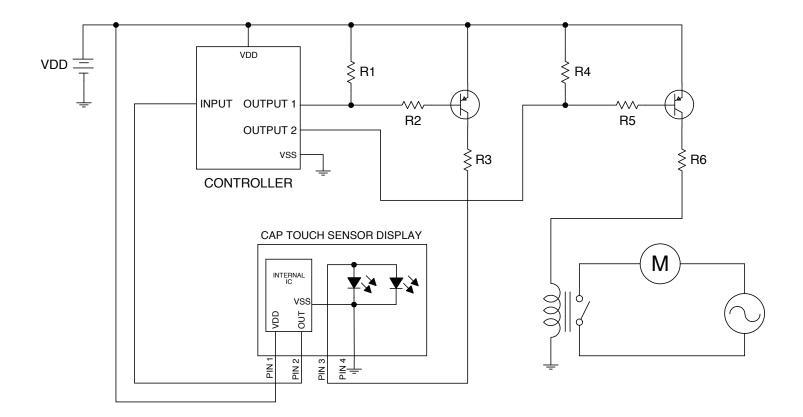
Soldering Iron: 30W Max

Temperature 350°C Max

Soldering Time: 3 Seconds Max (One Time)

Distance: 1.6mm min (From Seating Plane)

Application Circuit



Compliances and Approvals



the first call for illuminated components