

# Technical Data

## MicroTouch™ PL75\* Analog Resistive Touch Screen

### ELECTRICAL

Operating Voltage	3.3 to 5 VDC
Linearity	≤ 1.5% error
Absolute Position	≤ 1.5% on ITO coated polyester layers
Isolation	≥ 15 Mohm Isolation is the minimum resistance between traces that are not connected in the design when the sensor is not deliberately activated.

### OPTICAL

Transmittance	>74% typical @ 550nm using integrating sphere.
Clarity (Typical Values)	Hardcoat HCC01 – 17 % Hardcoat HCG12 – 6 % Hardcoat HCG10 – 2 % ASTM D1746-92

### ENVIRONMENTAL

Operating	<i>Operating High Temperature and Humidity:</i> 2 weeks continuous, Powered 5V, at -20C to +50C, and 90% RH.  <i>Operating at Low and High Temperature:</i> Closure and isolation measured during short term exposure to -20C and +50C
Storage	10 days continuous at -40C to +70C, ambient humidity.
Accelerated Aging	100 hours continuous exposure at +60C/95% RH.
Thermal Shock	25 cycles from -40C to 70C with dwell times of 30 minutes at extreme temp. and 10 min. transfer time between temps.

### MECHANICAL

	Data is for .004" diameter separator dots on a 0.14" pitch.
Activation Force	Stylus: < 25g average with plastic stylus with 1mm radius, full hemispherical tip. Finger: < 50g average with 5/8" diameter silicone finger.

Option	Custom activation force and palm rejection available.
--------	---

### DURABILITY

	Data is for .004" diameter separator dots on a 0.14" pitch.
Point Activation	>1,000,000 activations (typical) at a single point with a 5/8" diameter silicone finger with a 350g load at 2Hz, using a 3M Touch Systems SC4 controller.
Gouge Hardness	4H per ASTM D3363-92a

\* PL75 analog resistive touch screen construction is defined as a non-buffer layer, film on film construction with nominal 350 ohm/sq or higher ITO on polyester resistance, a glass backing panel and an Anti-Newton Ring, no vent design.

**Notice:** Given the variety of factors that can affect the use and performance of a 3M Touch Systems product, including that solid state equipment has operation characteristics different from electromechanical equipment, some of which factors are uniquely within User's knowledge and control, it is essential that User evaluate the 3M Touch Systems product to determine whether it is suitable for User's particular purpose and suitable for User's method of application. 3M Touch Systems' statements, engineering/technical information, and recommendations are provided for User's convenience, but their accuracy or completeness is not warranted. 3M Touch Systems products are not specifically designed for use in medical devices as defined by United States federal law. 3M Touch Systems products should not be used in such applications without 3M Touch Systems' express written consent. User should contact its sales representative if User's opportunity involves a medical device application.

**IMPORTANT NOTICE TO PURCHASER:** Specifications are subject to change without notice. 3M Touch Systems' Products are warranted to meet their published specifications from the date of shipment and for the period stated in the specification. **3M Touch Systems makes no additional warranties, express or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose.** User is responsible for determining whether the 3M Touch Systems products are fit for User's particular purpose and suitable for its method of production, including intellectual property liability for User's application. If a Product is proven not to have met 3M Touch Systems' warranty, then 3M Touch Systems' sole obligation and User's and Purchaser's **exclusive remedy**, will be, at 3M Touch Systems' option, to repair or replace that Product quantity or to refund its purchase price. 3M Touch Systems has no obligation under 3M Touch Systems' warranty for any Product that has been modified or damaged through misuse, accident, neglect, or subsequent manufacturing operations or assemblies by anyone other than 3M Touch Systems. **3M Touch Systems shall not be liable in any action against it in any way related to the Products for any loss or damages, whether non-specified direct, indirect, special, incidental or consequential (including downtime, loss of profits or goodwill) regardless of the legal theory asserted.** (11/01R2)



**3M Touch Systems**  
**3M Optical Systems Division**  
300 Griffin Brook Park Drive  
Methuen, MA 01844  
U.S.A.  
1-866-407-6666  
www.3mtouch.com

**Worldwide Manufacturing Plants:**  
Austin, Texas  
Methuen, Massachusetts  
Milwaukee, Wisconsin  
Vancouver, BC Canada  
Abingdon, UK



10% post-consumer waste paper

Printed in USA  
© 3M 2002  
PLSENSOR-0602