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THE OC™ PRODUCT LINE

CPFilms produces a wide line of optically clear (OC™) indium/tin oxide (ITO) coated transparent, conductive film products. OC™ products have many uses, for example, as components of touch screens and other position sensors, electroluminescent (EL) lamps, liquid crystal devices, electrophoretic displays, smart windows and transparent heaters.

CPFilms' OC™ products are produced by vacuum sputter deposition of ITO, a process that affords excellent coating uniformity and adhesion. All standard OC™ Products, which are listed below, are produced on optical grade polyester film. By special order ITO coatings are available on other film substrates, for example, heat stabilized film and anti-glare or clear hardcoated polyester film. Also by special order, CPFilms offers ITO coatings with a surface resistance that is higher than that of standard OC™ products.

OC™ PRODUCT	OC50	OC70	OC80	OC100	OC110	OC200	OC250	OC300	OC500
Resistance (ohms/sq.)	40-60	60-85	60-90	70-90	85-120	170-230	200-300	250-350	450-550
VLT (%)	85	80	80	78	78	82	85	85	88

Note: Transmittance and resistance values depend on the base film. The above values are typical of OC Products on optical grade polyester film, but are not intended to be specifications. See individual product note for more information.

ELECTRICAL UNIFORMITY

All OC™ products feature electrical uniformity of 10% within any one square foot area, defined as the maximum difference from the average ohms per square value within that area. However, touch screen manufacturers typically achieve <1% resistance linearity by orienting their sensors (busbars) so that the electrical current path is always in the direction of the length of the film roll.

THE OC™ PRODUCT LINE (cont.)

COATING ADHESION

CPFilms uses a special adhesion-enhancing process to sputter deposit its ITO on to the film substrate. All OC™ products must pass CPFilms stringent adhesion and abrasion test requirements. Copies of our test procedures are available through CPFilms Technical Service.

HANDLING OC™ FILM

Vacuum deposited ITO coatings are very thin and are easily scratched or cracked if handled improperly. When removing film from a roll, care should be taken not to bend or crease it. It is important never to allow the ITO coated side of film to come in contact with a surface, such as a table, during processing operations. Sliding the ITO coating over a surface will scratch the coating, resulting in elevated surface resistance and visible defects.

TECHNICAL SUPPORT

CPFilms offers technical support in OC™ product selection, handling and processing and in locating sources of manufacturing materials that are compatible with ITO. CPFilms can also provide optical characteristics of individual OC™ products (transmittance and reflectance spectra, L, a, b color coordinate numbers).

ORDERING OC™ PRODUCTS

CPFilms sells OC™ products in roll form only, shipped on six inch I.D. cores unless otherwise requested. When ordering rolls of film please specify the film thickness (microns, mils or gauge units), film width, length of film on each roll and the number of rolls desired. Most of CPFilms' customers order OC™ products on 25 thru 250 microns (0.5 thru 10 mils) film and product in that range is more readily available.

Note: To the best of our knowledge, all information contained in this document is accurate. However, CPFilms does not assume liability whatsoever for the accuracy or completeness of the information contained herein.