

# Visible Conductive Coating

CO CCO1 Without Anti-reflection coating

CO CCO2 Including Anti-reflection coating

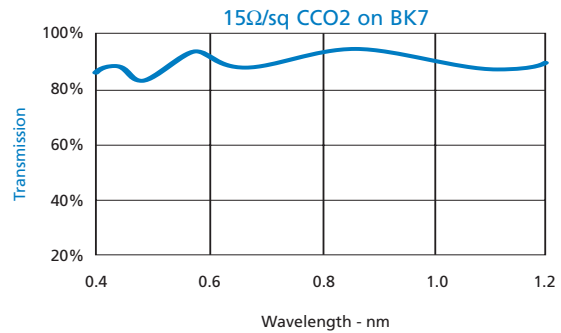
## DESCRIPTION

This coating is designed to have high conductivity and transmission over the 0.4 - 1.2  $\mu\text{m}$  range. It is suitable for use in aircraft instrumentation windows, CRT displays, anti-static, heating and EMC screening applications. L.C.D. Displays.

## SPECTRAL PERFORMANCE

Spectral performance of a typical coating is shown below. (NB. No anti-reflection coating on back surface).

$\Omega/\text{sq}$	%T on 1 mm thick BK7	
	CC01	CC02
008	82	88
010	84	88
020	87	91
050	84	92
100	85	93



## ELECTRICAL PERFORMANCE

Sheet resistance in the range 5  $\Omega$  to 5K  $\Omega$  per square can be achieved with tolerances of 10 to 15%, depending on resistivity requirements. This is achieved by varying the thickness of the Indium Tin Oxide (ITO) layer. The optical performance can then be achieved by adjusting the design of the anti-reflection coating.

## BUSBARS

CVI Melles Griot can also provide busbar technology, required for Electromagnetic Interference (EMI) and heating applications.

## EMC SCREENING PROPERTIES

$\Omega/\text{sq}$	Shielding effectiveness (300-1000 MHz)
100	15 dB
020	36 dB
010	42 dB

## ENVIRONMENTAL PERFORMANCE

The coating will pass the following tests:

Adhesion	MIL-C-48497	para 4.5.3.1
Humidity	MIL-C-48497	Para 4.5.3.2
Abrasion	MIL-C-48497	Para 4.5.3.3
Salt Solution	MIL-C-48497	Para 4.5.5.2

# Visible Conductive Coating

## CO CCO3

Low reflectivity conductive coating

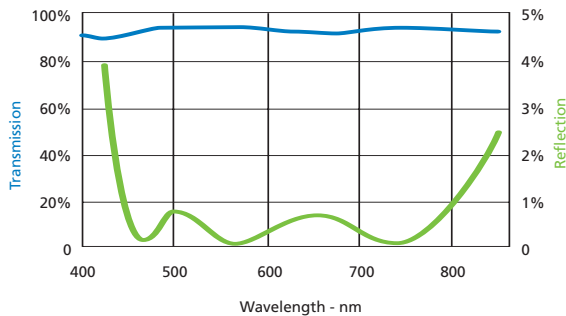
### DESCRIPTION

This coating has been designated to have extremely low reflectivity in the visible region, combined with excellent electro enhancement properties.

The coating can be used in cockpit lighting, or any environment where stray light and electromagnetic frequencies give problems, to provide contrast enhancement and E.M.C. screening.

### SPECTRAL PERFORMANCE

Typical spectral performance is shown below.



T ≥ 95% average, 450 nm to 800 nm, 1 mm thick  
 T = 35% ± 2% 450 nm to 800 nm on NG5, 2.5 mm thick  
 R ≥ 1.5% Average, 450 nm to 700 nm

### SHIELDING CHARACTERISTICS

Typical shielding performance is as follows.

KHz		MHz			GHz		
10	100	01	10	100	01	10	Frequency
140	125	100	85	60	45	30	Shielding (dB)

### EARTHING OF COATING

This is achieved using a conductive busbar around the perimeter of the substrate, the size of which can be made to your exact requirements. If desired, earthing leads can be soldered to the busbars.

### CEMENT / LAMINATION

The coating is compatible with optical cements and PVB to enable polarisers/dyed glass to be incorporated into constructions.

### ENVIRONMENTAL PERFORMANCE

The coating will pass the following tests:

Adhesion	MIL C-48497	Para 4.5.3.1
Humidity	MIL C-48497	Para 4.5.3.2
Abrasion	MIL C-48497	Para 4.5.3.3
Salt Solution	MIL C-48497	Para 4.5.5.2

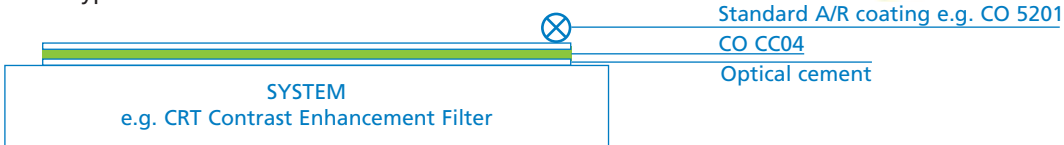
# Visible Conductive Coating

## CO CC04

Low reflectivity conductive coating

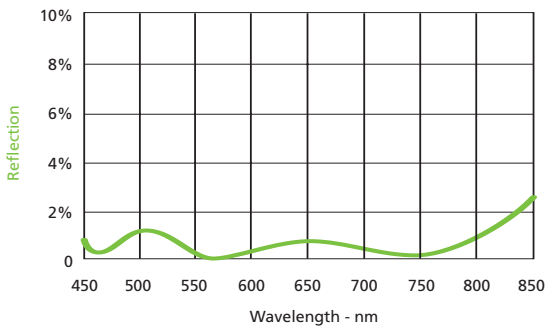
### DESCRIPTION

This coating is designed for systems to give EMC protection, where contrast enhancement and low reflectivity are also required. It can be cemented to an existing system to give EMC protection. Typical use of CC04 is shown below.



### SPECTRAL PERFORMANCE

Typical spectral performance is shown below.



### SHIELDING CHARACTERISTICS

Typical shielding performance is as follows.

KHz		MHz			GHz		
10	100	01	10	100	01	10	Frequency
140	125	100	85	60	45	30	Shielding (dB)

### EARTHING OF COATING

This is achieved using a conductive busbar around the perimeter of the substrate, the size of which can be made to your exact requirements. If desired, earthing leads can be soldered to the busbars.

### ENVIRONMENTAL PERFORMANCE

The coating will pass the following tests:

Adhesion	MIL C-48497	Para 4.5.3.1
Humidity	MIL C-48497	Para 4.5.3.2
Abrasion	MIL C-48497	Para 4.5.3.3
Salt Solution	MIL-C-48497	Para 4.5.5.2