

## Transparent conductive oxides

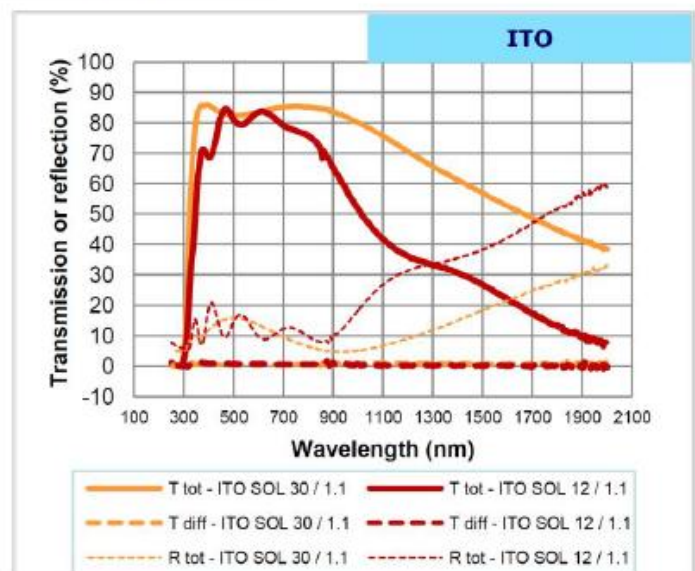
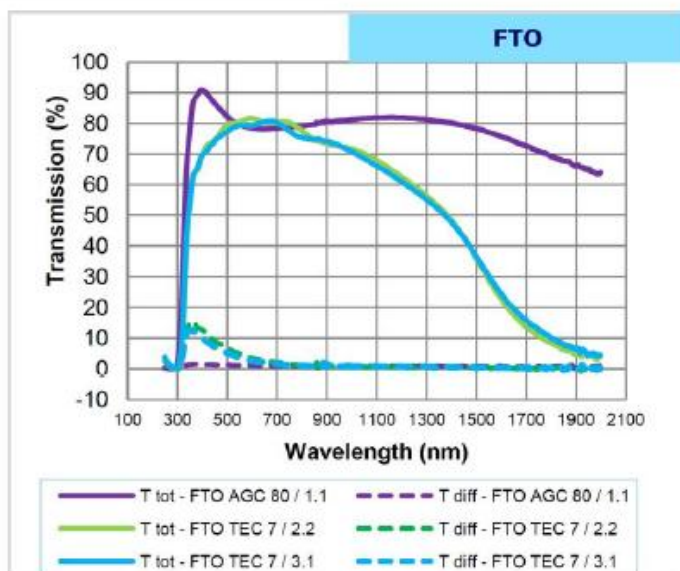
### TCO thin films on glass

- Fluorine doped-tin oxide (FTO) by CVD & Indium-tin oxide (ITO) by PVD
- On sodalime glass
- Sheet sizes 300 x 300 mm
- Cutting into small substrates according to requested size
- ITO coatings on special substrates (on request)

Product reference	Glass thickness (mm)	Material	Coating technique	Typical coating thickness (nm)	Square resistance (ohms.)	Total transmission (400-800nm)
<b>FTO AGC 80 / 1.1</b>	<b>1.1</b>	<b>SnO<sub>2</sub>:F</b>	<b>CVD</b>	<b>80</b>	<b>70 - 90</b>	<b>78 - 91 %</b>
<b>FTO TEC 7 / 3.1</b>	<b>3.1</b>	<b>SnO<sub>2</sub>:F</b>	<b>CVD</b>	<b>600</b>	<b>6 - 8</b>	<b>70 - 81 %</b>
<b>ITO SOL 30 / 1.1</b>	<b>1.1</b>	<b>ITO</b>	<b>PVD</b>	<b>80</b>	<b>25 - 35</b>	<b>82 - 86 %</b>
<b>ITO SOL 12 / 1.1</b>	<b>1.1</b>	<b>ITO</b>	<b>PVD</b>	<b>370</b>	<b>8 - 12</b>	<b>75 - 85 %</b>

N.B. FTO = Fluorine doped tin oxide    ITO = Indium tin oxide  
CVD = Chemical Vapor deposition    PVD = Sputtering

### Optical properties



**T tot** : Total transmission with integrating sphere - **T diff** : Diffusive transmission - **R tot** : Total reflection

Measurements made with a PERKIN ELMER Lambda 950 spectrophotometer - Glass substrate not deduced - Not contractual

• **Prices in euros per sheet 300 x 300 mm.**

*Plain sheets, or cut into identical rectangular or square shape pieces (only 1 size per sheet).*

▶ Take care of minimal cutting sizes (see below)

▶ Please write clearly the cutting size on your orders

• **ITO coatings on YOUR SUBSTRATES : ITOSOL 30 or ITOSOL 12 (on request)**

**Plain sheets (not cut)**

Reference	Sheet size (mm)	Unit price (in euros)
<b>FTO ou ITO SOL 30</b>	300 x 300	72
<b>ITO SOL 12</b>	300 x 300	197

**Sheet + cutting into maximum 100 pieces : fixed price.**

Reference	Glass thickness (mm)	Sheet size (mm)	Minimal cutting size (mm)	Unit price (euros)
<b>FTO AGC 80 / 1.1</b>	1.1	300 x 300	10 x 20	98
<b>FTO TEC 7 / 3.1</b>	3.1	300 x 300	20 x 20	98
<b>ITO SOL 30 / 1.1</b>	1.1	300 x 300	10 x 20	98
<b>ITO SOL 12 / 1.1</b>	1.1	300 x 300	10 x 20	223

**Sheet + cutting into more than 100 pieces : price upon quantity of pieces p. sheet (Q)**

Reference	Glass thickness (mm)	Sheet size (mm)	Minimal cutting size (mm)	Unit price (euros)
<b>FTO AGC 80 / 1.1</b>	1.1	300 x 300	10 x 20	98 + (Q x 0.40)
<b>FTO TEC 7 / 3.1</b>	3.1	300 x 300	20 x 20	98 + (Q x 0.40)
<b>ITO SOL 30 / 1.1</b>	1.1	300 x 300	10 x 20	98 + (Q x 0.40)
<b>ITO SOL 12 / 1.1</b>	1.1	300 x 300	10 x 20	223 + (Q x 0.40)

Examples :

• 300 x 300 mm ITOSOL 30 sheet cut into 20 x 25 mm = 180 pieces =  $98 + (180 \times 0.4) = 170$  euros HT

• 300 x 300 mm ITOSOL 12 sheet cut into 30 x 10 mm = 300 pieces =  $223 + (300 \times 0.40) = 343$  euros

Price are ex-works, tax excluded

Packaging included, shipment to be added

Lead time on request

Validity : 31.01.2019