

'TORAY'
Innovation by Chemistry

HIGHBEAM. CATALOGUE

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Highbeam* is a spattered film developed by Toray. It is transparent, electrically conductive film produced by spattering onto the surface of Lumirror*, Toray's biaxially oriented polyester film, with Indium Tin Oxide(ITO) or other materials.

■ Feature of Highbeam*

■ Low surface resistivity

Its surface resistivity level is 200 ohm/sq. even in the standard type.

Particularly targeted at application in electromagnetic wave shield, an ultra-low resistivity type, with resistivity value of 50 ohm/sq. or lower, is currently under development at Toray.

■ High transparency

The two properties that have so far been considered impossible to realize at the same time, namely, low surface resistivity and high transparency have been achieved. Furthermore, it is possible to design totally from base film using our technical skill which is developed by producing Lumirror*.

■ Special grades available

For some of the grades, the conductive layer has been covered with a special protective film to improve wear resistance, or the conductive layer has been given a special surface treatment to improve adhesion.

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Highbeam* types, construction, properties and applications

Type	Construction	Base thickness (μm)	Surface resistivity (.ohm/sq.)	Light transmission rate (%)	Thermal shrinkage (%)	Application
NX01	Ultra low shrinkage type PET/ITO	50,75,125	85	80	0.0	EL electrode (Electro luminescence)
NXS1	Ultra low shrinkage type with release film (75μm) PET(release) / PET / ITO	25	85	80	0.0	EL electrode (Electro luminescence)
NT02	Low shrinkage type PET / ITO	125	120	85	0.5	EL electrode (Electro luminescence)
CF98 NXC1	Low shrinkage with adhesive PET/ITO/adhesive layer	75,125	85	87	0.3	EL electrode (Electro luminescence)
CF05	High transparent type PET/ITO	125,175	150	92	0.8	Liquid crystal switchable Window glass
CH22	With surface protective layer PET/ITO/surface protective layer	125	300	85	0.5	Electromagnetic wave shield Transparent electrode

The characteristics data in the catalog are typical values and not assurance.

Measurement method :Base thickness, surface resistivity, Thermal shrinkage (150°C30min.)=JIS C2318、Light transmission=JIS K7105

In addition to the above types, which are in regular production at Toray, other types with different deposit metal, base thickness (15-188 micron), resistivity, or light transmission rate can be provided upon customer's request.

Please contact us for more information.

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2. Refer to our MSDS (Material Safety Data Sheet) before use.

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