

# VECTRA® E845I LDS

## Liquid Crystal Polymer

LDS capable LCP with higher DTUL and impact

Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant

UL-Listing V-0 in black a 0.25mm thickness per UL 94 flame testing.

UL = Underwriters Laboratories (USA)

### Product information

Resin Identification	LCP-(GF+MD)3 6	ISO 1043
Part Marking Code	>LCP-(GF+MD)36<	ISO 11469

### Rheological properties

Moulding shrinkage, parallel	0 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.2 %	ISO 294-4, 2577

### Typical mechanical properties

Tensile modulus	15000 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.7 %	ISO 527-1/-2
Flexural modulus	15000 MPa	ISO 178
Flexural strength	190 MPa	ISO 178
Flexural strain at failure	2.3 %	ISO 178
Charpy notched impact strength, 23°C	12 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Melting temperature, 10°C/min	335 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	255 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	8 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	58 E-6/K	ISO 11359-1/-2

### Electrical properties

Relative permittivity, 1MHz	3.87	IEC 62631-2-1
Dissipation factor, 1MHz	370 E-4	IEC 62631-2-1

### Physical/Other properties

Density	1770 kg/m <sup>3</sup>	ISO 1183
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### Injection

Drying Recommended	yes
Drying Temperature	150 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.01 %
Melt Temperature Optimum	340 °C
Min. melt temperature	340 °C

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Max. melt temperature	345 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C
Ejection temperature	296 °C

### Characteristics

Processing

Injection Moulding

Special characteristics

Flame retardant, Platable, High impact or impact modified, Heat stabilised or stable to heat, High Flow, Low Warpage, Laser Direct Structurable, Lead-free soldering resistant

### Additional information

Processing Notes

#### Pre-Drying

VECTRA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be  $\leq -40^{\circ}\text{C}$ . The time between drying and processing should be as short as possible.