ESL ELECTROSCIENCE
CERAMIC TAPES & THICK-FILM MATERIALS
416 EAST CHURCH ROAD
KING OF PRUSSIA, PA 19406-2625, U.S.A
T: 610-272-8000
F: 610-272-6759
www.electroscience.com

MAGNETIC TAPE 40011

RoHS Compliant* Lo-Fire Tape for Multilayer and High Frequency Applications Requiring High Permeability

ESL 40011 is a flexible cast film of magnetic powder dispersed in an organic matrix. It is designed to be fired at 885°C to give a dense body. Multilayer parts can be formed by laminating metallized sheets of the tape into a monolithic structure prior to firing. A pressure/temperature combination of 10.5 MPa and 70°C works well for laminating this tape. Magnetic tape is provided on a silicone-coated polyester film to minimize environmental contamination, to protect it from mechanical damage, and to aid in handling. This material is useful in high frequency applications that require high permeability.

PROCESSING PARAMETERS

LAMINATING:	10.3 MPa (1500 psi) at 70°C
FIRING TEMPERATURE:	900±15°C
TIME AT PEAK TEMPERATURE:	2 – 3 hours

TAPE CHARACTERISTICS

TAPE THICKNESS:	65-75 µm (2.6 – 3.0 mils)
COLOR:	brown
SHELF LIFE:	12 months

ESL Affiliates
ESL Europe (Agmet Ltd) • 8 Commercial Road • Reading • Berkshire • England • RG2 0QZ • Tel: +44 (0) 118 918 2400 • Fax: +44 (0) 118 986 7331 • Sales@ESLEurope.co.uk

ESL Nippon • Sukegawa Bldg. • 6th floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: +81-3-3864-8521 • Fax: +81-3-3864-9270 • Sales@ESL-Nippon.co.jp

ESL China • Room #1707, Tower A, City Center of Shanghai • 100 Zunyi Road • Shanghai, China 200051 • Tel: +86-21-6237-0336 and 0337 • Fax: +86-21-6237-0338
ESLChina@eslshanghai.net

FIRED TAPE PROPERTIES (Using co-fired ESL 903-A silver conductor)

PERMEABILITY:		
(100 KHz)		**≥** 200
INSULATION RESISTANCE:		
(100 VDC)		$\geq 10^8$ Ω
Thermal Coefficient of Expansion:		
(25°C to 300°C)		9.4 ppm/°C
BREAKDOWN VOLTAGE:		> 1000 VDC/25 µm
FIRED SHRINKAGE:		
(Using recommended processing parameters)	X and Y	18 ± 1 %
	Z	18 ± 1 %
FIRED DENSITY:		
(Theoretical)		5.30 g/cm^3
COMPATIBLE CONDUCTORS:		ESL 903-A, 903-B, 902

***None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.**