TACONIC
Finding a better way

TLC Specialty Products

TLC specialty products

(TLC-338 and 35) join the TLC family of laminates (TLC-27, 30 & 32) to extend our line of cost effective substrates suitable for a wide range of microwave applications. Available with a Dk range of 3.38 to 3.50, TLC specialty products offer superior electrical performance compared to thermoset laminates (e.g. FR-4, PPO, BT, polyimide and cyanate ester). TLC's construction also provides exceptional mechanical stability.

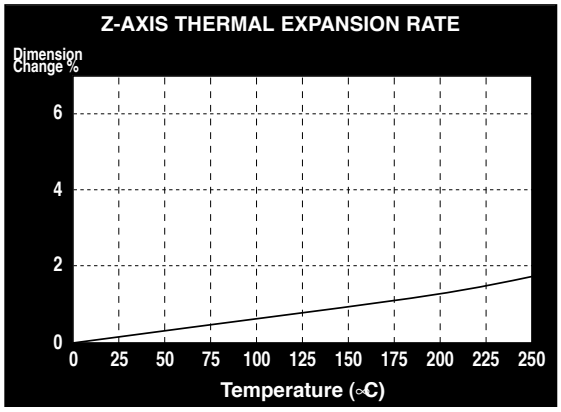
TLC specialty products can be sheared, drilled, milled and plated using standard methods for PTFE/woven fiberglass materials. The laminates are dimensionally stable and exhibit virtually no moisture absorption during fabrication.

Taconic is a world leader in RF laminates and high speed digital materials, offering a wide range of high frequency laminates and prepregs. These advanced materials are used in the fabrication of antennas, multilayer RF and high speed digital boards, interconnections and devices.

Benefits & Applications:

- **Low cost**
- **Tightly controlled Dk**
- **Low Df**
- **Excellent dimensional stability**
- **Hig exural strength**
- **UL 94 V-0 rating**
- **D at over frequency**

- **LNBs**
- **Power amp ers**
- **PCS/PCN large format antennas**
- **Passive components**



Asia / Australia
Korea Taconic Company
Republic of Korea
Tel: +82-31-704-1858
sales@taconic.co.kr

China
Taconic Advanced Material
(Suzhou) Co., Ltd.
Suzhou City, China
Tel: +86-512-286-7170
tssales@taconic.co.kr

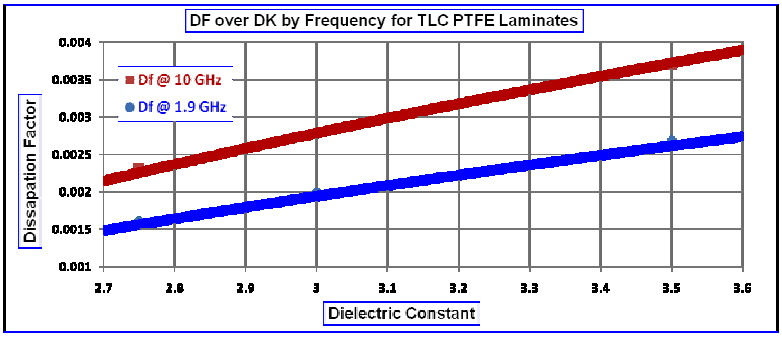
North & South America
AGC Nelco America Inc.
Tempe, AZ 85281
Tel: (480) 967-5600
TaconicPO@agc-nelco.com

Europe / Middle East
Neltec SA
Lannemezan, France
Tel: +33(0)5 62 98 52 90
neltecsasales@agc-nelco.com

An ISO 9001 Registered Company
www.taconic-add.com

TLC-338 & 35 Typical Values					
Property	Test Method	Unit	Value	Unit	Value
Dk @ 10 GHz	IPC-650 2.5.5.5		3.38, 3.50		3.38, 3.50
Df @ 10 GHz	IPC-650 2.5.5.5		0.0034, 0.0037		0.0034, 0.0037
Moisture Absorption	IPC-650 2.6.2.1	%	<0.02	%	<0.02
Dielectric Breakdown	IPC-650 2.5.6	Kv	>45	Kv	>45
Volume Resistivity	IPC-650 2.5.17.1	Mohms/cm	10^8	Mohms/cm	10^8
Surface Resistivity	IPC-650 2.5.17.1	Mohms	10^8	Mohms	10^8
Arc Resistance	IPC-650 2.5.1	seconds	>180	seconds	>180
Flexural Strength (MD)	IPC-650 2.4.4	lbs./inch	>24,000	N/mm²	>165
Flexural Strength (CD)	IPC-650 2.4.4	lbs./inch	19,000	N/mm²	131
Peel Strength (1 oz. copper)	IPC-650 2.4.8	lbs./linear inch	12.0	N/mm	2.1
Thermal Conductivity	ASTM F 433	W/m/K	0.24	W/m/K	0.24
CTE (x-y axis)	ASTM D 3386/TMA	ppm/°C	9 - 12	ppm/°C	9 - 12
CTE (z axis)	ASTM D 3386/TMA	ppm/°C	70	ppm/°C	70
UL-94 Flammability Rating	UL-94		V-0		V-0

All reported values are typical and should not be used for specification purposes. In all instances, the user shall determine suitability in any given application.



Designation	Dk	Dielectric Thickness inches	Dielectric Thickness mm
TLC-338	3.38 +/-0.05	≥0.0080	≥0.20
TLC-35	3.50 +/-0.05	≥0.0100	≥0.25

Available Copper Cladding				
Designation	Weight	Copper Thickness inches	µm	Description
CH	1/2 oz / ft²	~0.0007	~18	Electrodeposited
C1	1 oz / ft²	~0.0014	~35	Electrodeposited
C2	2 oz / ft²	~0.0028	~70	Electrodeposited

Heavy metal claddings (aluminum, brass & copper) may also be available upon request. Standard sheet size is 36" x 48" (914 mm x 1220 mm). Please contact our Customer Service Department for the availability of other thicknesses, panel sizes and claddings.

Available Sheet Sizes Inches	mm
12 x 18	304 x 457
16 x 18	406 x 457
18 x 24	457 x 610
16 x 36	406 x 914
24 x 36	610 x 914
18 x 48	457 x 1220

RoHS WEEE Compliant

rev. 4/10

An example of our part number is: **TLC-35-0620-CH/CH - 18" x 24" (457 mm x 610 mm)**