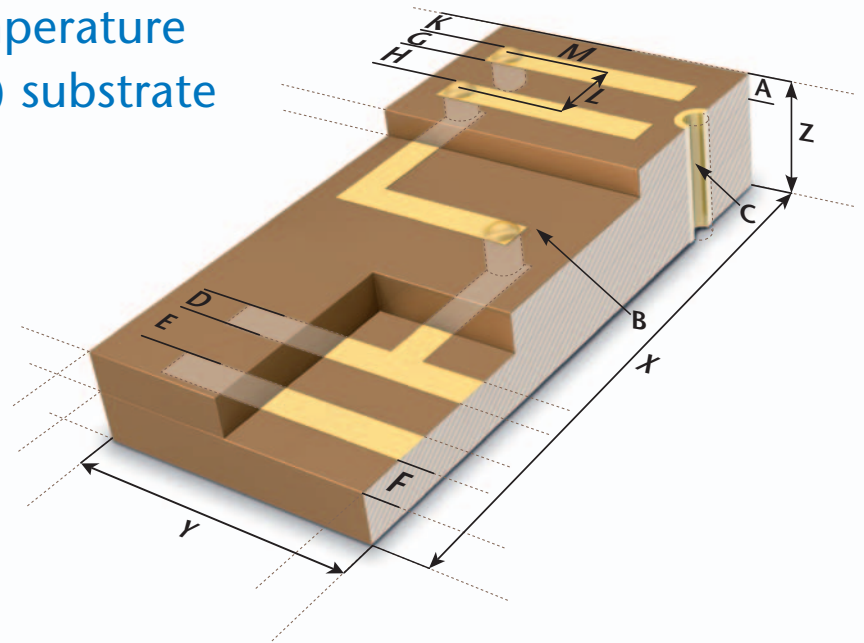


# Design rule for High Temperature Cofired Ceramics (HTCC) substrate

## Packages for:

- Pump lasers
- MEMS applications
- IR sensors



## Materials Data:

		mark	standard	tolerance	special	tolerance
Structure Parameters	Length/Width (as fired)	X/Y	5 - 25	± 1 % (as fired)	2 - 50	± 0.5 % (as fired)
	Length/Widht (machined)	X/Y	5 - 25	min. ± 0.05 mm	2 - 50	min. ± 0.03 mm
	Substrate Thickness	Z	0.4 - 3	± 0.1 mm	0.2 - 5	± 0.05 mm
	Layer Thickness green	A	0.15, 0.2, 0.25 0.32, 0.4, 0.5	± 10 %	0.12	± 5 %
	Flatness (green cut)		0.08 / 10 mm		0.05 / 5 mm	
	Flatness (fired + diced)		0.02 / 10 mm		0.005 / 10 mm	
Vertical Interconnects	Filled Via					
	Typical Diameter	B	0.18		0.1	
	Diameter Range		0.18 - 0.3		0.1 - 0.5	
	Via-to-Via Centerline	L	1		0.45	
	Via-to-Edge	M	A + B			
	Bore Coated Via					
	Typical Diameter (ID)	C	0.4			
Diameter Range		0.4 - 0.8				
Internal Metal Circuit	Line Width (without via)	D	0.15	± 20 %	0.08	± 20 %
	Line-to-Line Space (far from via)	E	0.15	± 20 %	0.08	± 20 %
	Line Width (with via)		0.33	± 20 %	0.20	± 20 %
	Line-to-Line Space (near via)		0.25	± 20 %	0.15	± 20 %
	Space from edge	F	0.5		0.2	± 20 %
Surface Metal Circuit	Line Width (without via)	G	0.15	± 20 %	0.1	± 20 %
	Line-to-Line Space (far from via)	H	0.15	± 20 %	0.1	± 20 %
	Line Width (with via)		0.33	± 20 %	0.25	± 20 %
	Line-to-Line Space (near via)		0.3	± 20 %	0.2	± 20 %
	Space from edge	K	0.5		0.2	

unit: mm, %

## For more information:

Electronic Packaging  
**SCHOTT AG**  
 Christoph-Dorner-Strasse 29  
 84028 Landshut  
 Germany

Phone: +49 (0)871/826-329  
 Fax: +49 (0)3641/288-89090  
 Tanja.Wituschek@schott.com  
 www.schott.com/epackaging

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