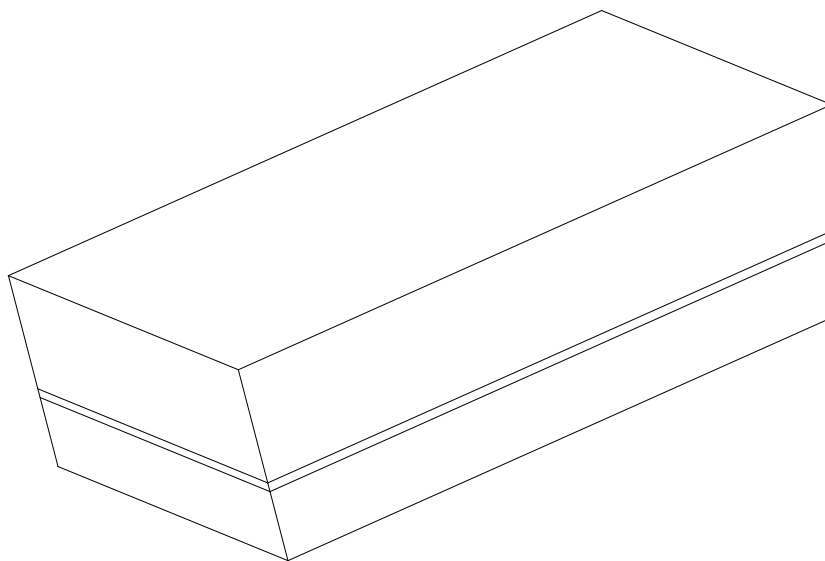


Wooriro Splitter Chip

**WOORIRO 1 X N SPLITTER CHIP
SPECIFICATIONS**



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Dimensional Parameters

<i>Parameter</i>	-	<i>Unit</i>	<i>Nominal Value</i>	<i>Tolerance</i>
Length of PLC Chip	L	mm	Refer to page 7	± 0.3
Width of PLC Chip	W	mm	Refer to page 7	± 0.2
Thickness of PLC Chip	H	mm	2.50	± 0.2
Thickness of Substrate	T	mm	1.00	± 0.05
Thickness of adhesive	t	um	max. 50	
Width of beveling	W_{C1}, W_{C2}	um	max. 500	
Width of step	W_{L1}, W_{L2}	um	max. 200	
No. Of Output Ports	-	Ch	2~128	-
Spacing	-	um	127, 250	± 0.1
Center Spacing	-	um	Refer to page 7	± 0.1
Front Polishing Angle	θ_f	degree	8	± 0.3
Side Polishing Angle	θ_s	degree	90	± 0.3

Table 1. Dimensional parameters

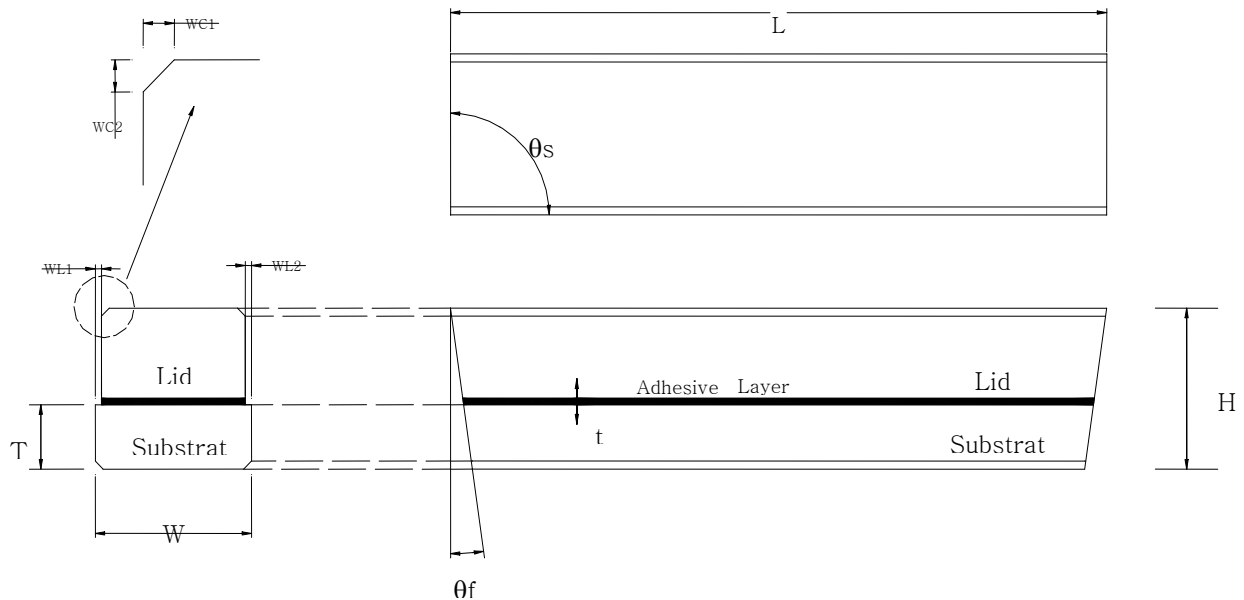
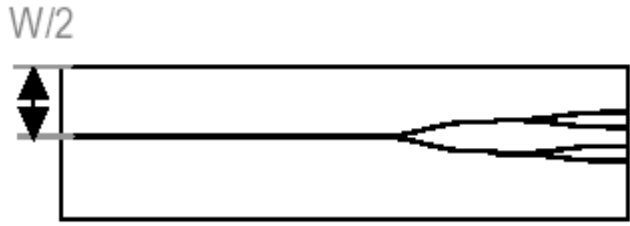


Figure 1. Dimensional parameters

Parameter and Tolerance	Figure
Position of the single waveguide circuit shall be the center of the chip. Distance between the single waveguide circuit and the side surface of the chip shall be $W / 2 \pm 100$ [um].	

Visual Inspection Standard Polishing Side

Card No: QC-WSC-1.0A

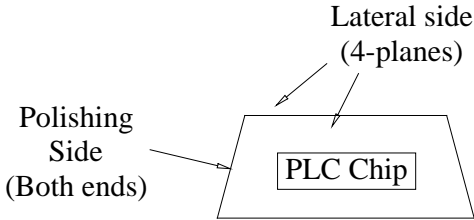
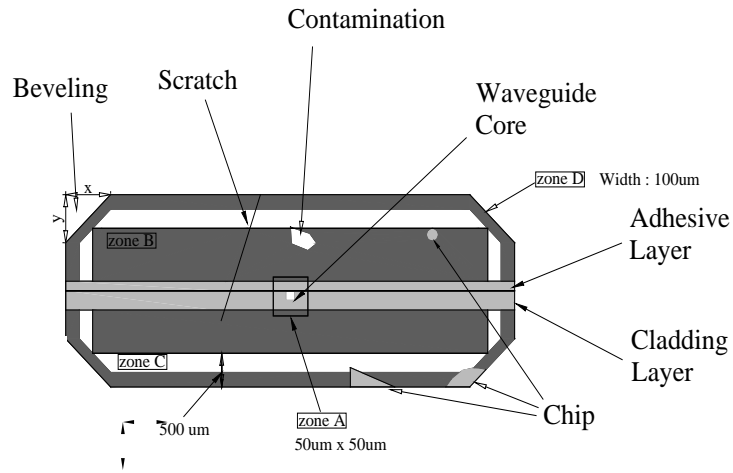
Equipment: Microscope-Magnification x50			
	Zone A	Zone B	Zone C
Scratch	Width $\leq 20\mu\text{m}$: OK Width $> 20\mu\text{m}$: NG		
Chip	No visible features are allowed.	Size $\leq \phi 300\mu\text{m}$ up to 3pcs: OK Size $> \phi 300\mu\text{m}$: NG	Length $> 500\mu\text{m}$: NG Width $> 500\mu\text{m}$: NG Continuous chips in Zone D are excluded.
Contamination	No visible features are allowed except for which could be easily removed by ethanol		
Beveling	No visible features are allowed.		x, y $\leq 500\mu\text{m}$: OK x, y $> 500\mu\text{m}$: NG

Table2. Polishing Side

< Polishing Side (Input) >



< Polishing Side (Output) >

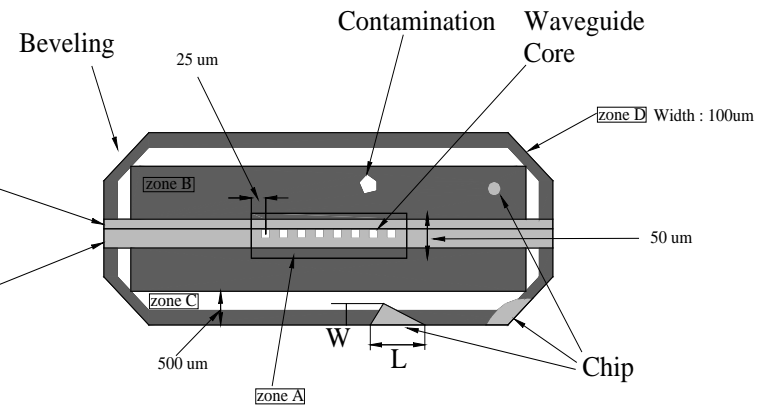


Figure 2. Polishing Side

Visual Inspection Standard Lateral Side

Card No: QC-WSC-1.0B

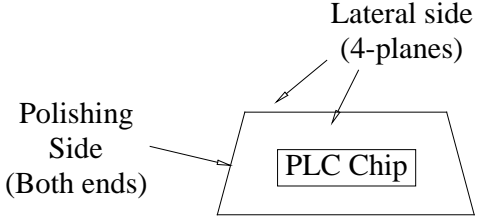
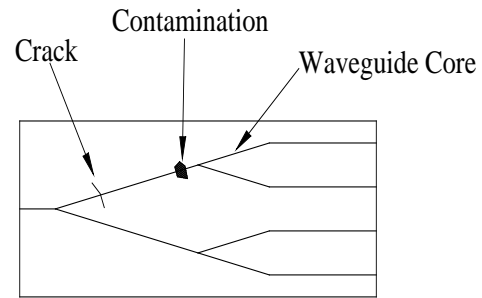
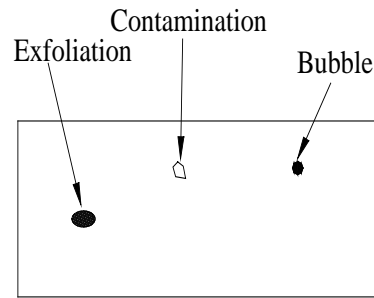
<p>Equipment: Microscope-Magnification x50</p>		 <p>The diagram shows a trapezoidal PLC Chip. Arrows point to the top and bottom edges, labeled 'Lateral side (4-planes)'. Another arrow points to the left and right edges, labeled 'Polishing Side (Both ends)'. The chip is labeled 'PLC Chip' in a central box.</p>
Part	Equipment	Specifications
Core & Cladding Layer	Microscope x50	<p><Crack> No visible features are allowed.</p> <p><Contamination> Size > 500um: NG</p>
Adhesive Layer	Microscope x50	<p><Exfoliation></p> <p>No visible features are allowed on the waveguide.</p> <p><Contamination></p> <p>Size ≤ φ 500um: OK</p> <p>Size > φ 500um: NG</p> <p><Bubble></p> <p>Size ≤ φ 500um: OK</p> <p>Size > φ 500um: NG</p>
Surface	Eyes x1	<p><Contamination, Scratch, Crack, Chip></p> <p>< Chip > Length > 500um : NG, Width > 300um : NG</p> <p>Chipping(Defect) on backface > 500um : NG</p> <p>No visible features are allowed except for beveling and scratch and which could be easily removed by ethanol cleaning.</p>

Table 3. Lateral Side

< Lateral Side >
(Core & cladding Layer)



< Lateral Side >
(Adhesive Layer)



< Lateral Side >
(Surface)

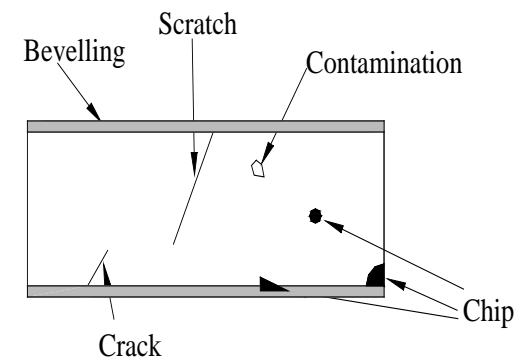


Figure 3. Lateral Side

Wooriro Splitter Chip

Chip type	Spacing	W (± 0.2) x L* (± 0.3) [unit: mm]	Characteristic
1 x 2	250um	2.1 x 9.8	
1 x 3	250um	2.1 x 9.8	
1 x 4 R1	250um	2.1 x 9.8	
1 x 6	250um	2.1 x 10.1	
1 x 8 R4	127um	2.1 x 11.0	
1 x 8 R1	250um	2.5 x 11.4	
1 x 12	127um	2.1 x 11.5	
1 x 16 R1	127um	2.6 x 13.5	
1 x 16 R1.1	127um	2.3 x 13.4	
1 x 24	127um	4.47 x 14.5	
1 x 32 New	127um	4.9 x 19.5	254um(Center Spacing)
1 x 32 R1	127um	4.6 x 16.3	
1 x 32 OV-R1	127um	4.3x 19.4	
1 x 64 R1	127um	8.66 x 20.5	
1 x 128	127um	16.8 x 29.8	

Table 4. Wooriro Splitter Chip*: Polishing angle: 98 degrees (Lid long)

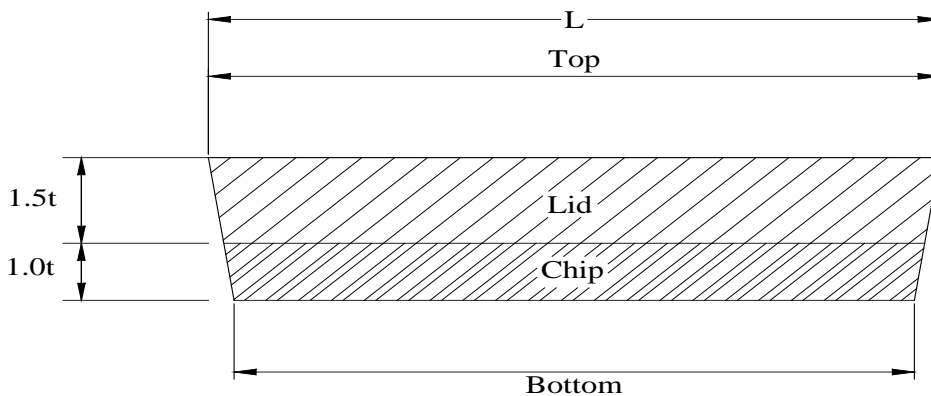


Figure 4. Wooriro splitter Chip

Operating Conditions

<i>Parameter</i>	<i>Unit</i>	<i>Specifications</i>
Operating Temperature	°C	- 40 ~ + 85
Wavelength Range	nm	1260 ~ 1650
Maximum Input Power	mW	500

Table 5. Operating Conditions

Optical Parameters

Model NO	WSC-1×2		WSC-1×3	WSC-1×4		WSC-1×6	WSC-1×8		WSC-1×12	WSC-1×16
1 × N	1 × 2		1 × 3	1 × 4		1 × 6	1 × 8		1 × 12	1 × 16
Chip Level	P	S	S	P	S	S	P	S	S	P
IL (MAX)	3.5	3.7	5.7	6.7	7.0	8.8	9.8	10.3	12.2	13.0
Uni. (MAX)	0.5	0.5	0.6	0.5	0.6	0.7	0.6	0.7	0.8	0.7
PDL (MAX)	0.15	0.2	0.2	0.15	0.2	0.2	0.2	0.2	0.2	0.2
Model NO	1 × 16	1 × 24	1 × 32		1 × 64	1 × 128				
Chip Level	S	S	P	S	S	S				
IL (MAX)	13.5	15.5	16.2	16.5	19.5	23.5				
Uni. (MAX)	1.0	1.2	1.0	1.3	1.5	2.0				
PDL (MAX)	0.23	0.25	0.2	0.25	0.25	0.4				

Table 6. Wooriro Splitter Chip Specification