



O&E Package Solution

Product Specification

Spec#: TO18 mini Cap

AFN: JDFZ-JS-A01

VER: 000

1. Product Description

1.1 Specifications : TO18 mini Cap

1.2 Drawing No. : HP1006001C

2. Product Specifications

2.1 Substrate Specifications

2.1.1 Material : Shell: 4J50, Window: D263T

2.1.2 Size : Shell: H=2.6-13° φ0.5, Window: φ1.85×1.60×0.3

2.1.3 Surface quality : Clear aperture optical surface conforms to MIL-PRF-13830B 60/40

Effective light transmission MIL-PRF-13830B 40/20, no pocking

2.1.4 Solder : HFJD low-temperature glass 1# (radiation resistant glass) sintering packaging

2.2 Finished Product Specification

Dimension (mm)	Depth (mm)	Effective Clear Aperture (mm)
2.6+0.1/+0	/	Φ0.4min

2.3 Spectrum Specifications

AR Coating on both side , Tavg > 99.5%@1250-1550nm , incident angle : 0-10°;

2.4 Air tightness

Leakage rate < 5X10⁻¹⁰ Pa·m³/s He

3. Appearance Quality

Item		Criteria		Instruments
Glass	gap(periphery)	Depth	<0.2 mm Acceptable	Microscope
		Width	<0.2 mm Acceptable	
	pocking	According to the drawing		Microscope
	scratches	Total length less than 1/4 diameter, width ≤ 0.04mm Acceptable		Microscope
Soldering flux	air bubbles	< ¼ Welding area Acceptable Welding area ¼ ~ ½, Qty≤3 Acceptable >Welding area ½ Not allowed		Microscope

	packaging	Welding area without notch, impurities and other defects	
	overflow of solder	Functional area \geq Minimum Effective Clear Aperture	
Shell	burr	Maximum: 0.02mm	Microscope
	spots	Covered by metallized layer and intact	
	rust	Not allowed	
	color	No color difference, Overall color uniform acceptable	
	surface	No fouling, bubbling, oxidizing black spot and other welding pollution.	Microscope

4. Reliability test

Item	Methods	Criteria	Sampling	Instruments
Solderability	Soldering in high temperature 400°C. After cooling down, using thrust meter to detect thrust.	Welding thrust > 3kg/mm ²	Per lot	Thrust meter
High temperature boiling	100°C/0.095-0.105Mpa/10H	Air Tightness < 5X10 ⁻¹⁰ Pa·m ³ /s He	Per lot	High temperature cooking equipment Leak detector

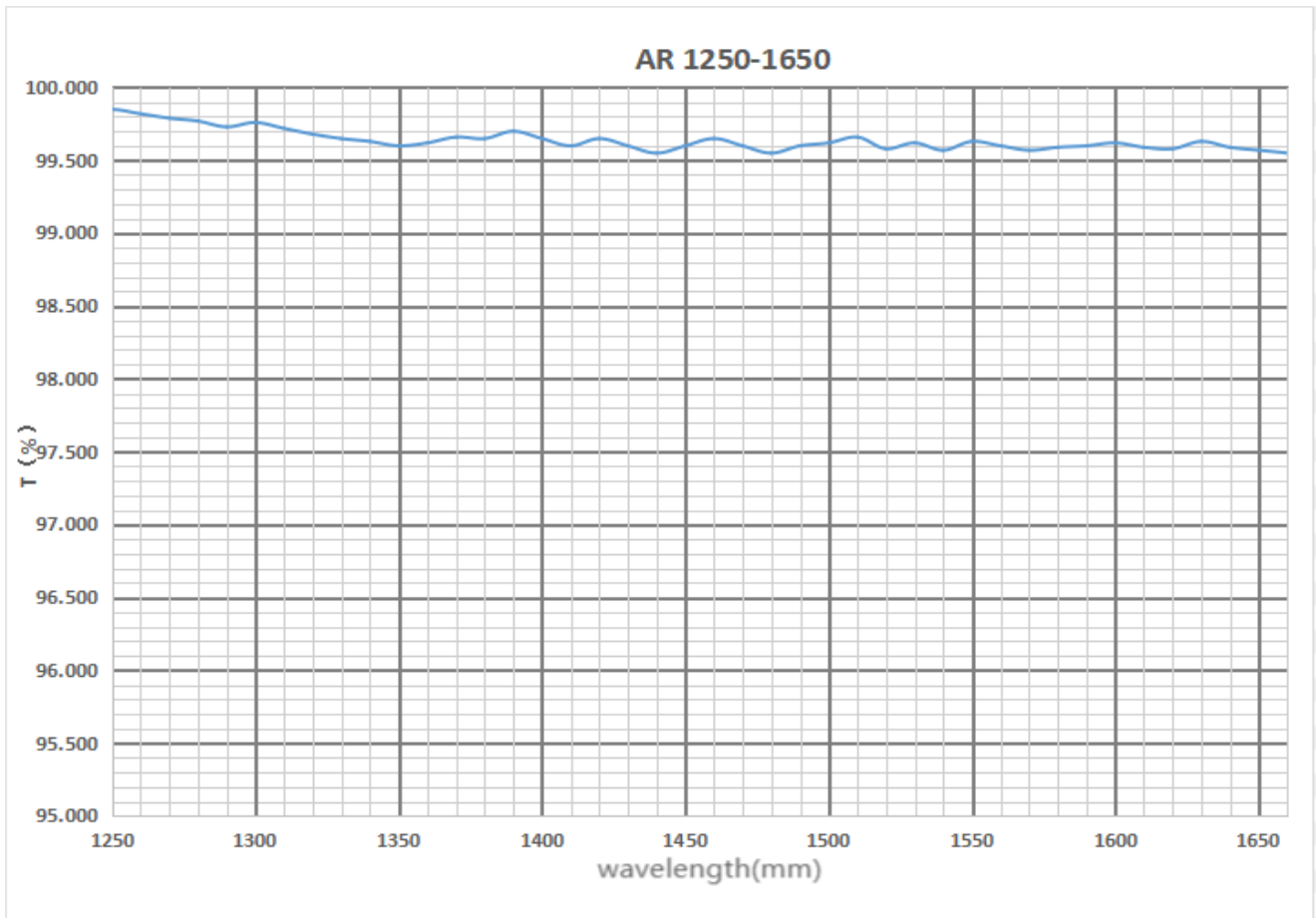
5. Package

- 5.1 The product packaging box uses anti-static materials to ensure the cleanliness of the packaging box and ensure that the materials will not be polluted and corroded.
- 5.2 The boxes are packed into clean bags, filled with desiccant and vacuum baled.
- 5.3 The vacuum packaging bag is attached with a label, which contains: Lot No., product name, quantity, delivery date, and company name.
- 5.4 The packing box needs to have flexible materials such as foam to ensure that the vacuum of the packing box does not fail and is not damp.

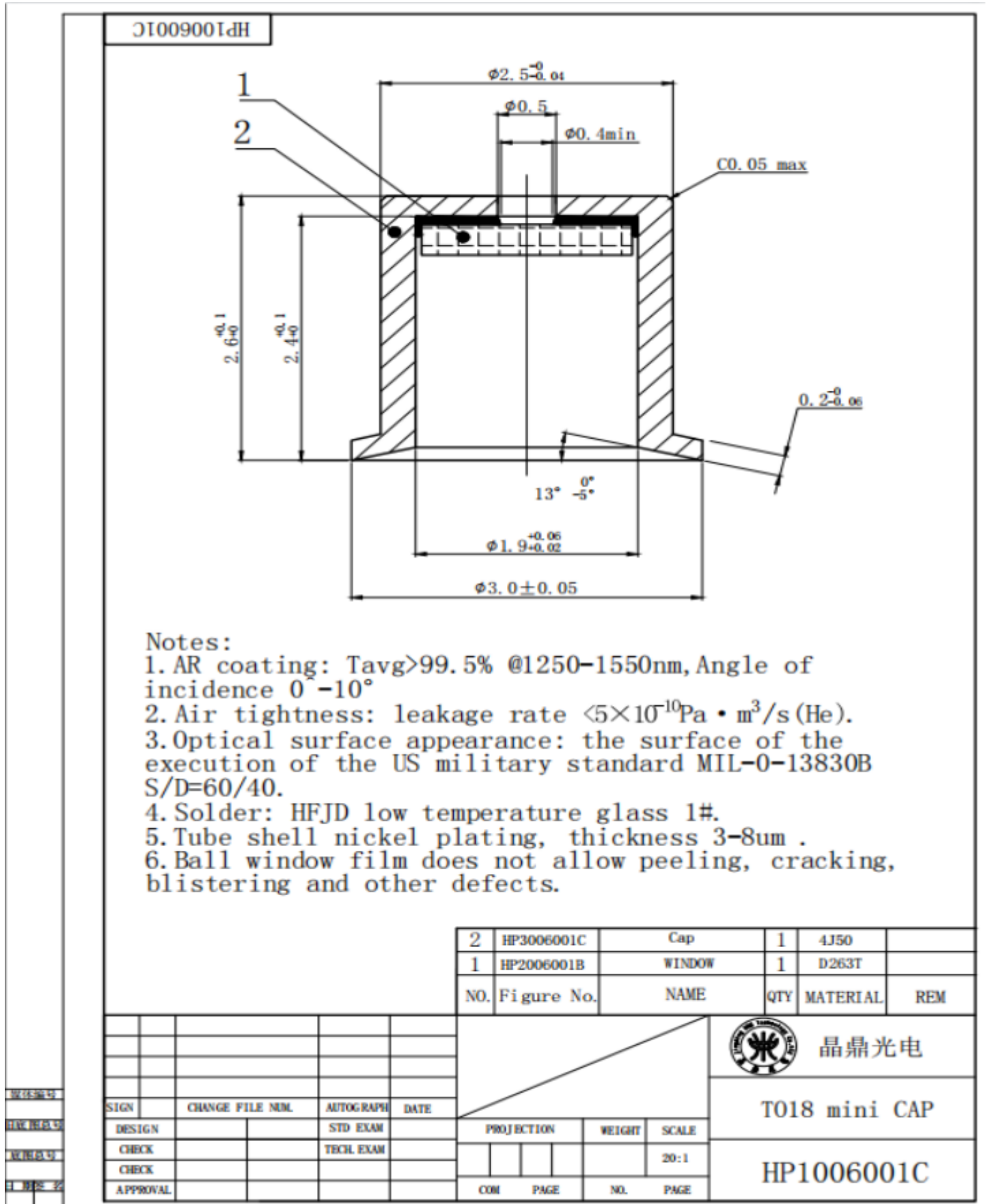
6. Shipping

- 6.1 The products should be packed in a sturdy box. The box should meet fragile goods transport requirements.
- 6.2 Avoid direct exposure to the rain, snow and mechanical collision during transportation.
- 6.3 Inspection reports should be packed in the packing box and the report should meet the requirements according to the drawings.

7. Spectrum



8. Drawing No. : HP1006001C



Notes:

1. AR coating: $T_{avg} > 99.5\%$ @1250-1550nm, Angle of incidence $0 - 10^\circ$
2. Air tightness: leakage rate $< 5 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s} (\text{He})$.
3. Optical surface appearance: the surface of the execution of the US military standard MIL-0-13830B S/D=60/40.
4. Solder: HFJD low temperature glass 1#.
5. Tube shell nickel plating, thickness 3-8um .
6. Ball window film does not allow peeling, cracking, blistering and other defects.

2	HP3006001C	Cap	1	4J50	
1	HP2006001B	WINDOW	1	D263T	
NO.	Figure No.	NAME	QTY	MATERIAL	REM

						晶鼎光电
				TO18 mini CAP		
				HP1006001C		
SIGN	CHANGE FILE NO.	AUTOGRAPH	DATE	PROJECTION	WEIGHT	SCALE
DESIGN		STD EXAM				20:1
CHECK		TECH EXAM				
CHECK						
APPROVAL				COM	PAGE	NO. PAGE