



Inspection Direction, Swap

Applicable for EC400 and EC400g

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1 General

This document describes the cosmetic inspection requirements each product must meet if it is to be designated as an exchange unit (swap).

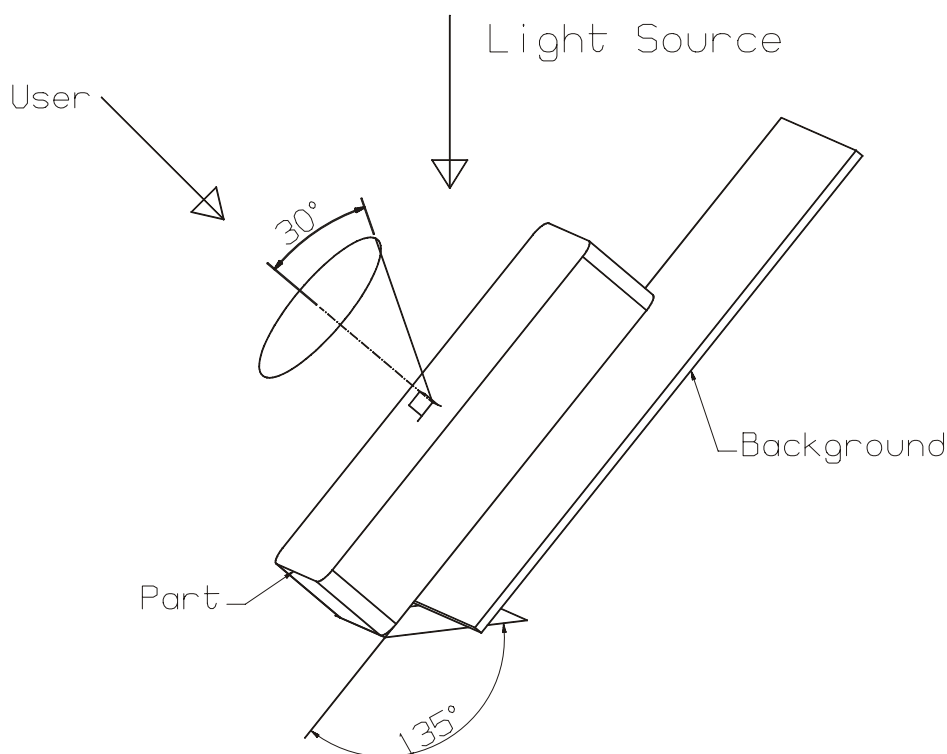
This document may not have covered all possible defects. Should you encounter a new area of concern not documented here then contact the appropriate quality authority for guidance.

2 Inspection Environment

The component should be placed approximately 10cm in front of a grey (NCS 5010-G90Y) background. General lighting should be 1000 lux \pm 200 lux, indoors, diffused, fluorescent warm white light. The light should be distributed from straight above.

The standard viewing distance for all surfaces {cosmetic & non cosmetic} will be 40 to 50cm. *{This is an average representation of 1 arm's length & is a standard inspection class to represent the normal operational distance by the product user.}*

The part should be inspected with the specified lighting directly above with the part at 45° to the light. The part should be viewed nominally at 90° to the front surface and rotated by 30° in all directions so that it reflects the light.



3 Order of Inspection

The inspection sequence and approximate times allowed should be:

Front	Class 1
Left and Right Side	Class 1
Rear	non-cosmetic
Bottom	Class 1
Top	Class 1
Total: 8 Seconds maximum	

4 Unacceptable Defects

Unless specifically mentioned in the text, defects are not accepted anywhere on cosmetic (visible to the end user) surfaces. Examples include (but not limited to) the following:

- Sink Marks
- Gating Point marks
- Blank Marks
- Burrs
- Flash
- Flow lines
- Stress marks
- Colour variation
- Drag marks from tool release
- Gas entrapment marks
- Scratch marks
- Dents

5 Area Defintions

Type B: All top, bottom and side surfaces, and edges all around which are visible to end users. All surfaces that are visible after assembly and when antenna is in operational position.

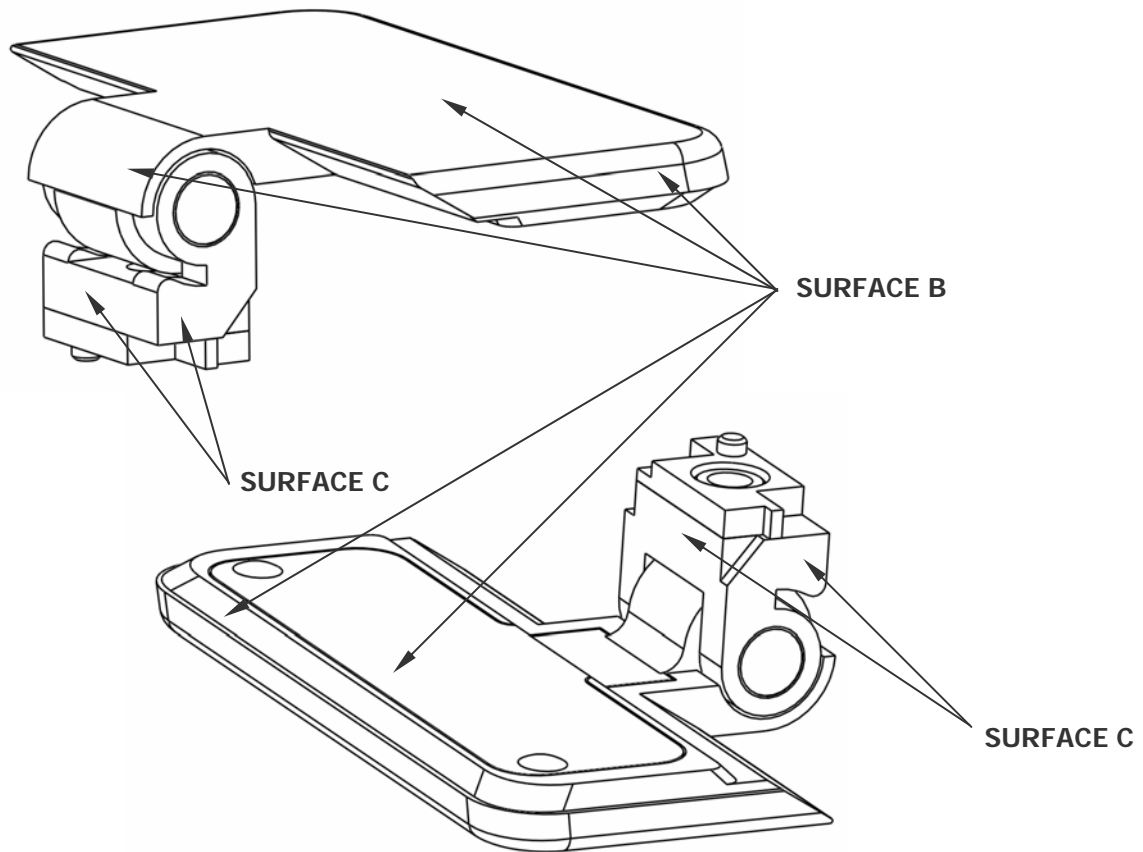
Type C: Hidden surfaces, visible when side doors removed.

Type D: Inside surfaces, not visible when fully assembled.

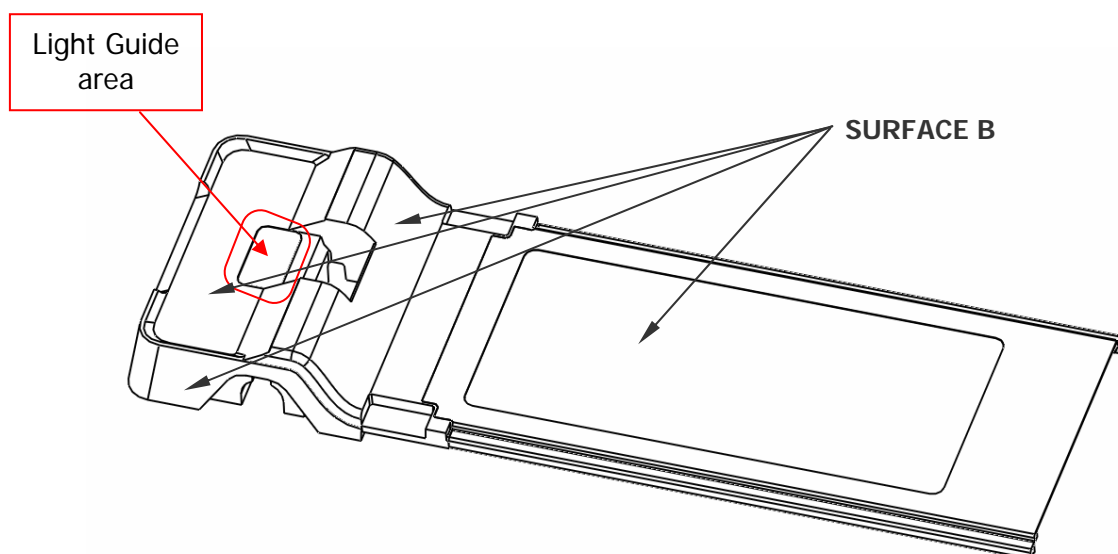
Surface Type	Defect Size	Maximum defects per part	Order of Inspection	Time of inspection
B	0.05 mm ²	2	3	5 seconds
C	0.15 mm ²	2	2	5 seconds
D	1 mm ²	2	1	3 seconds



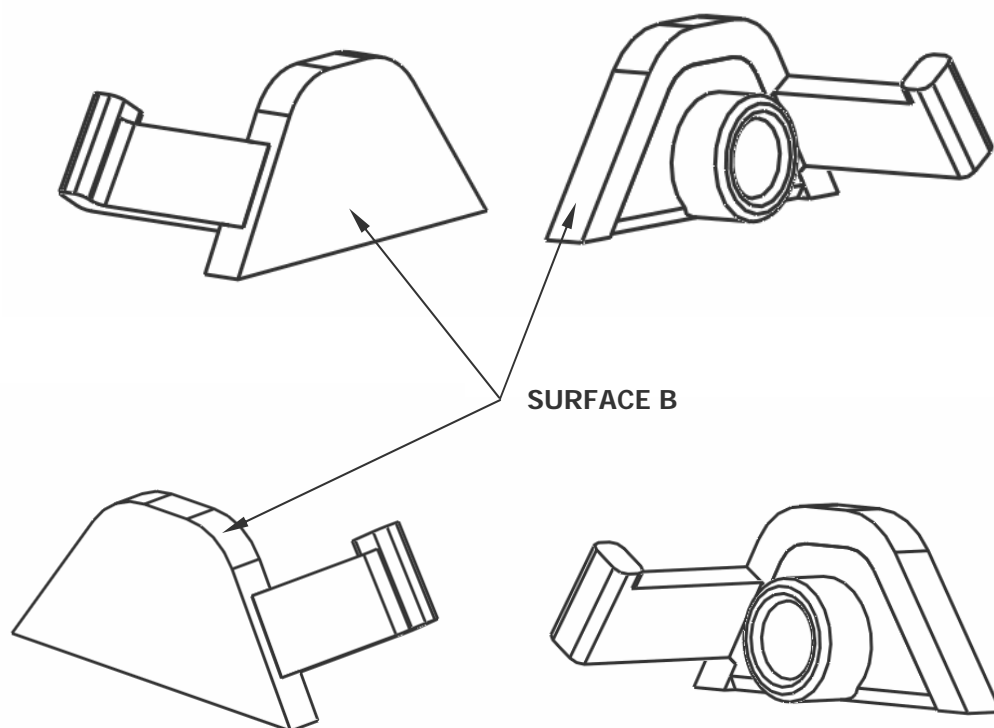
6 External Antenna



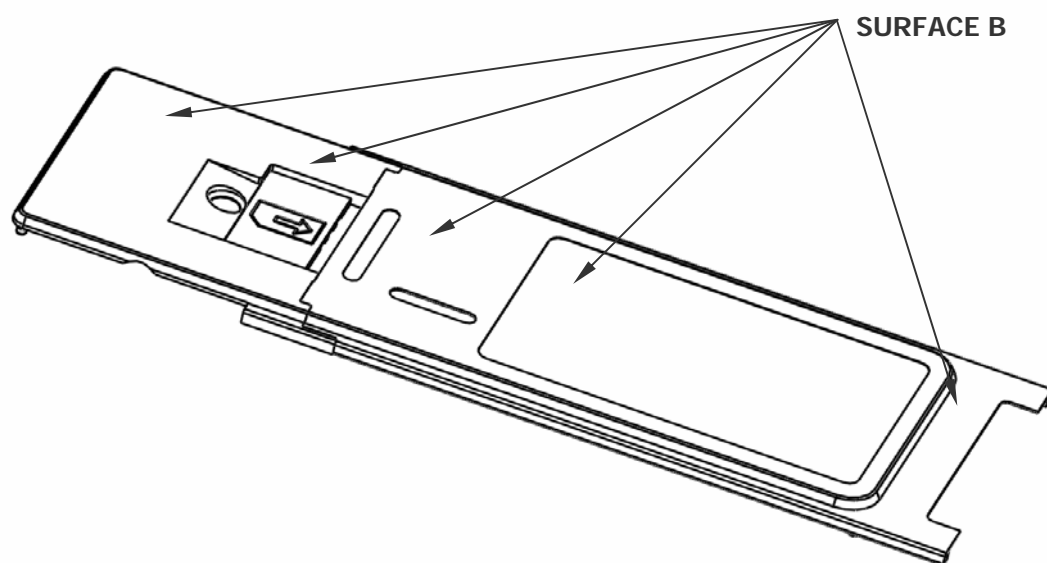
7 Top Cover



8 Side Doors



9 Bottom Cover



10 Tolerance

10.1 Top Cover and Bottom Cover

An assembly gap of maximum 0.2 mm is accepted between top cover and bottom cover, all around.

10.2 Top Cover and side door

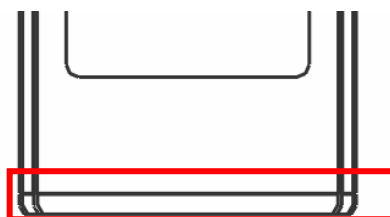
An assembly gap of maximum 0.4 mm is accepted around side door openings.

10.3 Top Cover and Light Guide

An assembly gap of maximum 0.4mm is accepted around the light guide.

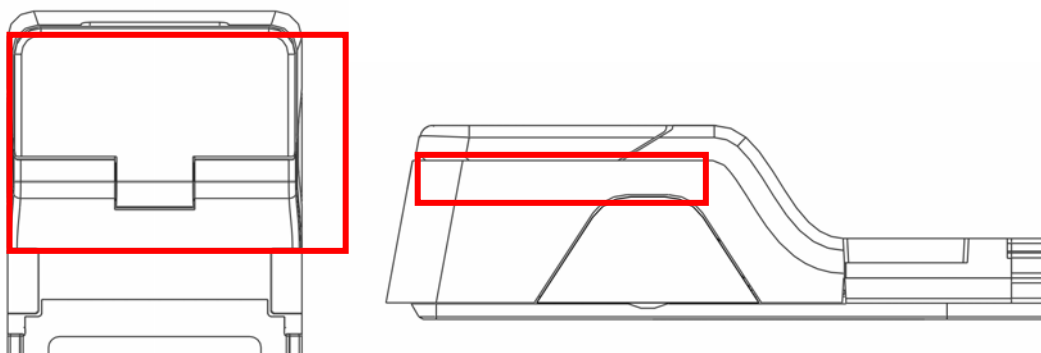
10.4 Top/Bottom Cover and 26 Pin Connector

An assembly gap of maximum 0.4 mm is accepted around connector.



10.5 External Antenna Assembly Gap

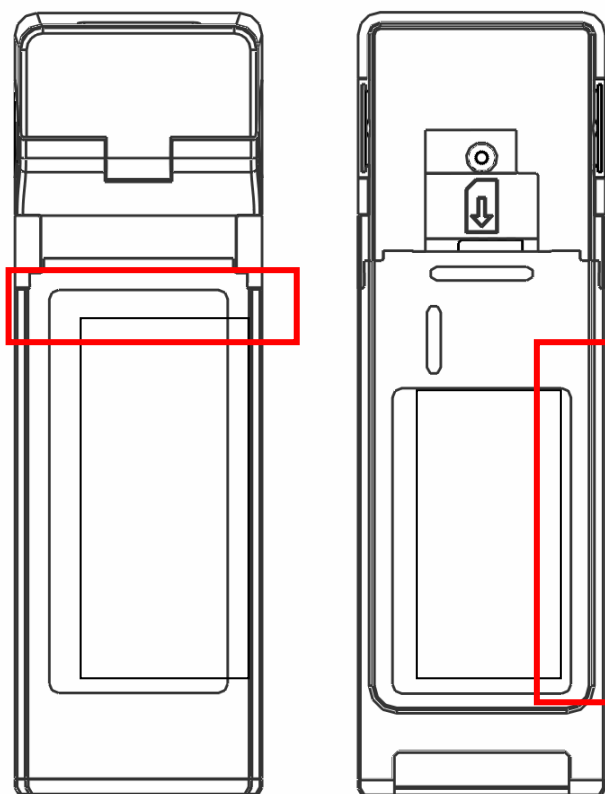
- Maximum allowed gap between antenna and top cover: 0.5 mm.
- No skews allowed between antenna and top cover, after assembly.



11 Label Placement Accuracy

Label must be fully within the boundary defined by the label recess.

Maximum label "skew" shall be as follows: The maximum skew (distance between the edge of label and the edge of the recess) between label and label recess is not to exceed 0.6 mm, all around.



The maximum number of air bubble in a 20mmX20mm area, is not to exceed 1, with diameter less than 0.6 mm. The total number of above air bubbles is not to exceed 2, on one label.

12 Revision History

Rev.	Date	Changes / Comments
1	2008-July 8	Initial Release