

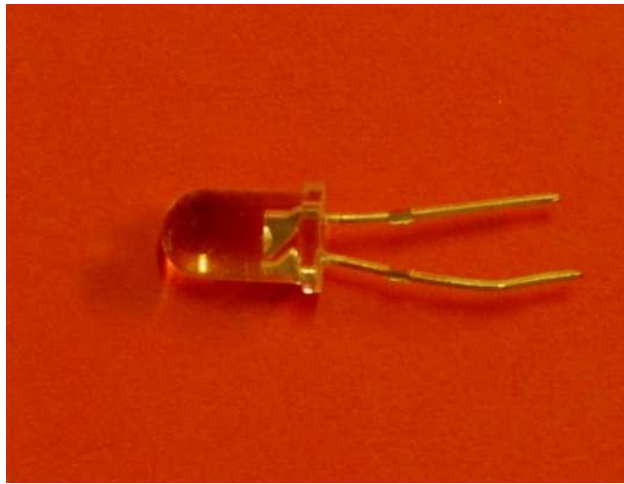
OSM/IN DECISION

Standard: EN 60730-1:2000 + A12:2003 + A1:2004 + A13:2004 + A14:2005 + A15:2007 + A16:2007 + A2:2008	Sub clause: 20.3.1	Sheet N°: OSM/IN 259
Subject: Type of insulation required for a 230 V supplied LED with its top surface accessible with the test finger	Key words: - LED - Basic insulation - Supplementary insulation	Meeting N°: 20 (2010) Item: 4.1.3
<p>Question:</p> <p>A product under test is fitted with two light emitting diodes in the 230 V~ circuit. The top surface of these is accessible with the test finger. According to EN 60730-1 clause 20.3.1, the minimum requirement for distance through insulation is 0.7 mm. Is it acceptable for this distance to be measured through the body of the LED between the internal live metal parts and the accessible surface or is an additional layer of supplementary insulation required?</p> <p>A photograph of the LED in question and a limited view of the front of the product under test are attached on second page (Annex 1). The product passes the electric strength test for reinforced insulation and there is an adequate creepage distance between the leads and accessible surfaces.</p> <p>Decision:</p> <p>When the LED complies with the below requirements, no supplementary insulation shall be required:</p> <ul style="list-style-type: none"> - 0,7 mm internal solid insulation; - creepage and clearance distances are sufficient for reinforced isolation; - electric strength and insulation resistance for reinforced insulation; - mechanical strength. <p>Explanatory notes: Diagrammatic representation of distances are given in Annex 2.</p> <p style="text-align: right;"><i>To be continued</i></p>		

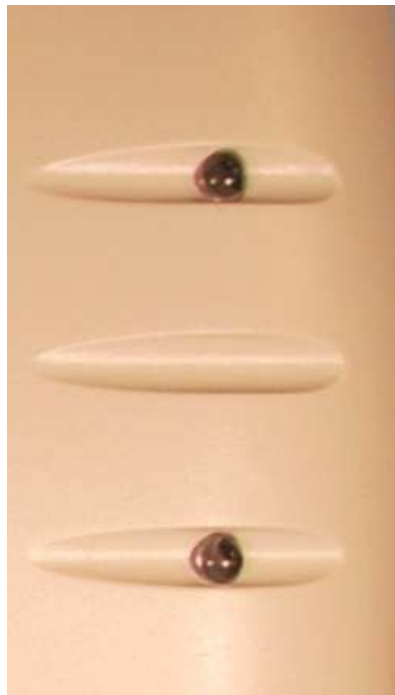
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Annex 1: Pictures for explanation



LED in question



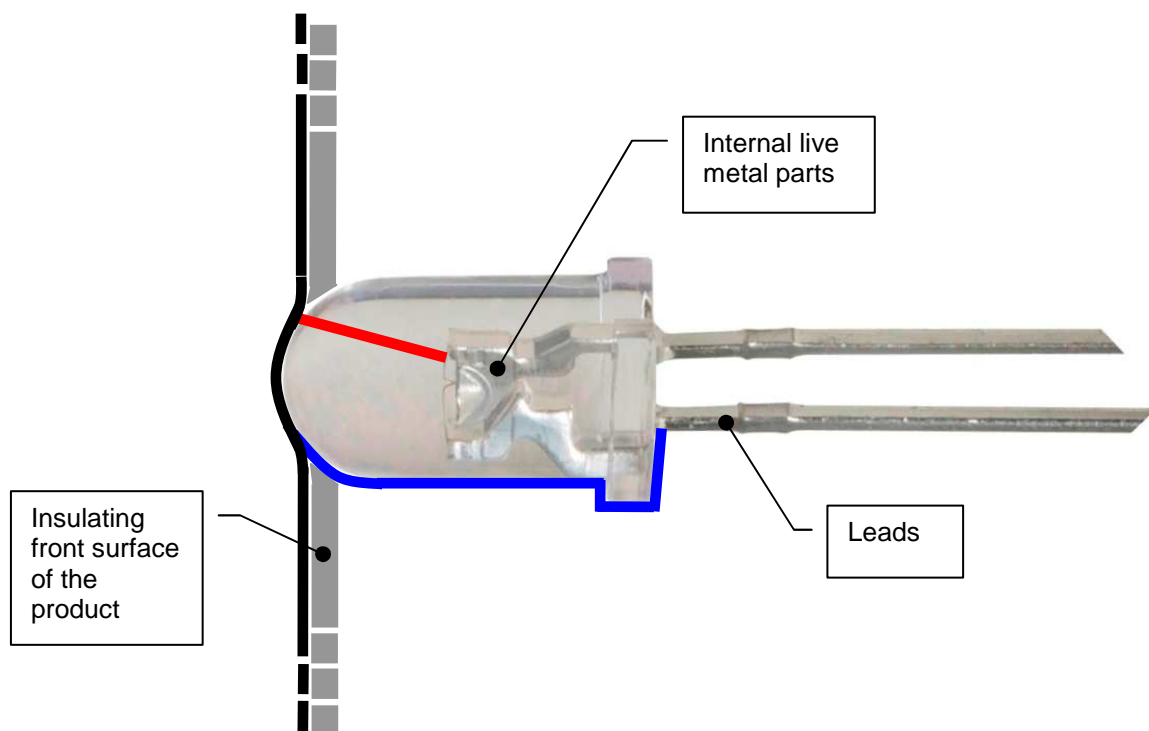
Limited view of the front of the product under test




To be continued

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Annex 2: Diagrammatic representation of distances



-  Creepage and clearance distance for reinforced isolation
-  Distance through insulation (the insulation may consist of solid material plus one or more air layers)
-  Accessible surface (surface accessible with the test finger)