



DECISION SHEET

<b>Standard(s):</b> IEC 60950-1:2001	<b>Sub clause(s):</b> 1.5.2, 4.5.1, 5.3	<b>DSH-560</b> Page 1(1)
<b>Subject:</b> Temperature limits of opto electronic devices used for separation	<b>Key words:</b> - Limits during normal operation - Limits during fault operation	Decision confirmed by CTL at its 42nd meeting 2005 in Cancun
<b>Question:</b> During the tests of subclause 4.5.1 and 5.3 the temperatures of critical components shall be evaluated and shall be compared to their limiting values. For certain materials and components the standard provides detailed instructions (e.g. in Table 4B, Table B.1, Table C.1) and for others only general compliance statements are provided (e.g. Note 3 of Table 4B part 2, subclause 5.3.8). Opto couplers are often located in proximity to heat sources (e.g. transformers). The reliability of the materials used as insulator can degrade if thermally overstressed. IEC 60950-1 does neither provide limit values for opto couplers nor does Annex P provide a reference to the relevant component standards. a: What are the limit values for opto couplers during normal operation of the EUT? b: What are the limit values for opto couplers during fault operation of the EUT?  <b>Decision:</b> Temperature ratings as shown on the corresponding component certificate (standards see “Explanatory Notes” below) shall be taken as limit values. For opto couplers bridging safety isolation the maximum temperature $T_s$ shall not be exceeded during both normal and fault operation. A minimum of 100 °C is considered for $T_s$ for IEC 60747-5-x certified opto couplers.  <b>Explanatory Notes:</b> The relevant IEC component standards are: - IEC 60747-5-1:1997 - IEC 60747-5-2:1997 - IEC 60747-5-3:1997 which might be replaced by the future IEC 60747-5-5 (after being published).		