**INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

**TITLE: Compilation of comments and observations on ExTAG/540/CD - Draft ExTAG Decision Sheet – Smartphone or a tablet containing a LED to support a camera function.**

**Circulated to: ExTAG – IECEx Testing and Assessment Group**

**INTRODUCTION**

This document contains the compilation of comments received on ExTAG/540/CD - Draft ExTAG Decision Sheet – Smartphone or a tablet containing a LED to support a camera function, with observations from the originator, PTB, DE.

As a result of comments received and considered, a revised Draft Decision Sheet ExTAG/540A/CD has now been published for consideration and is issued for additional consideration over a six week period.

***Please inform the Secretariat immediately of any omissions or errors at***

***Christine Kane***

On behalf of Mr. Julien Gauthier

***Julien Gauthier***

***ExTAG Secretary***

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| **Address:****IECEx Secretariat** **Level 33 Australia Square****264 George Street** **Sydney NSW 2000****Australia****Web:** [**www.iecex.com**](file:///C%3A%5CUsers%5Cjugauthier%5CAppData%5CLocal%5CTemp%5CnotesC9812B%5Cwww.iecex.com) | **ExTAG Secretary****Mr Julien Gauthier****LCIE S.A.****33 Avenue du General Leclerc****92260 Fontenay-aux-Roses****FRANCE** **Tel: +33 1 40 95 55 26****Fax: +33 1 40 95 89 37****Email :** **julien.gauthier@fr.bureauveritas.com** |

| **ExCB/****ExTL** | **Clause/ Sub-clause** | **Paragraph Figure/****Table** | **Type of****comment****General/****technical/****editorial** | **COMMENTS** | **Proposed change** | **Observation****(to be completed by the originator)** |
| --- | --- | --- | --- | --- | --- | --- |
| **DEK****KEMANL** |  |  | G | We agree with ExTAG/540/CD |  | Noted. |
| **ExTC****AU** | Question | 1 | General | While we have sympathy for the proposal, we feel that the Question is completed only after specifying the Ex protection being considered.Merely mentioning smartphone or a tablet containing a LED does not provide clarity, because it is possible that the smartphone electronics may have used Ex ib type of protection, but the LED may have used Ex e type of protection. And in this case, impact test is necessary.  | Rewrite the question as “Is a smartphone or a tablet containing a LED to support a camera function, **with the entire equipment being considered as intrinsically safe**, require to be impact tested according to a luminaire in the sense of IEC 60079-0?And then the answer is “**No. The test for Resistance to impact is not applicable for intrinsic safety equipment, except when IEC 60079-11:2011 Clause 6.1.2.3a) is applied**” | Not accepted, as this question is not linked to 60079-11 only. |
| **FME****GB** |  |  | te | Smartphones and tablets either include an app or it is possible to download an app so that the LED on the rear of the device can be used as a torch. If this function is enabled or an app is installed permitting this use then the LED would be operating as a normal function of the smartphone and this would not be an auxiliary function.Ergo, the low impact energy would be appropriate if there is no torch function enable on the smartphone, otherwise the high impact energy would apply. | Modify as shown,Where there is no torch application or the smartphone or tablet torch function is disabled No, a smartphone or a tablet containing a LED to support a camera function is a portable or transportable Ex Equipment, as where the built  a build in LED has only an auxiliary function and where the main function of the equipment is not to be a luminaire. Thus, it is not considered as a portable or transportable luminaire and the impact requirements for luminaires, such as footnote b of table 15, are not applicable. However where there is a torch function or this function is not permanently disabled, or an app can be installed by the user enabling the LED to be used as a torch, the requirements for portable luminaires such as footnote b of table 15, are applicable.  | Accepted in principle, see comment of IEC TC 31 WG 22 |
| **FMG****US** |  |  | **te** | The “question” asked by the draft Decision Sheet is whether an LED supporting a camera function is considered a luminaire. We believe the “answer” to that very specific question is “no”, but maybe it is actually the wrong question. We agree that an LED supporting the camera with a “flash” function is not a luminaire. However, that may not be the only function of that LED. Today, many smartphones and tablets include a function where the LED on the rear of the device can also be used as a “torch” or “flashlight” to provide area illumination. If this function is enabled, the LED could be operating as a normal function of the smartphone and this would not be an auxiliary function.In accordance with the current requirements, for a typical smartphone or tablet, the LED and camera lens on the rear of the device would be subject to the “high” risk of mechanical danger (0.7 kg-m) for portable handlights, but the much larger display screen on the opposite side of the device could be subjected to either the “low” or “high risk of mechanical danger tests for light transmitting parts (0.2 kg-m or 0.4 kg-m) as appropriate.The “low” risk of mechanical impact would only be applicable to the LED and camera lens IF the “torch” or “flashlight” function was not present, or was disabled on the smartphone or tablet. | Modify as shown,Where there is no “torch” or “flashlight” function, or that function has been disabled, No, a smartphone or a tablet containing an LED to support a camera function is considered a portable or transportable Ex Equipment, as where the integral a build in LED has only an auxiliary function and where the main function of the equipment is not to be a luminaire. Thus, it is not considered as a portable or transportable luminaire and the impact requirements for luminaires, such as footnote b of table 15, are not applicable. However where there is a “torch” or “flashlight” function, or this function is not disabled, the requirements for portable luminaires, such as footnote b of table 15, are applicable. | Accepted in principle, see comment of IEC TC 31 WG 22 |
| **ITL****IL** | **21.1****26.4.2** | **15** | **NA** | ExTAG is acceptable as is | **NA** | Noted |
| **LOMES** |  |  | **General** | LOM agrees this DS |  | Noted |
| **NANIO CCVE (ExCB and ExTL)****RU** |  |  | **General** | We support this ExTAG Decision Sheet without comments |  | Noted |
| **NCC****BR** | **21.1****26.4.2** | **Table 15** |  | We understand that the requirements for light-transmitting parts without guard are applicable in this case. |  | Noted |
| **NEPSI****CN** |  |  | **G** | We support the draft decision sheet ExTAG/540/CD. |  | Noted |
| **QPS****CA** |  |  |  | QPS supports the draft decision sheet and has no further comment. |  | Noted |
| **SIQ****SI** |  |  |  | We agree with proposal. |  | Noted |
| **TC31****WG22** |  |  | **te** | WG22 notes that an IECEx Decision Sheet cannot be used to modify requirements, only to help clarify them and promote uniform application. The suggestions below attempt to work with, and attempt to clarify, those existing requirements. Further discussion, and possible revisions to the requirements will be considered during development of Edition 8 of IEC 60079-0, likely commencing in October 2019, with publication in late 2022.(Continued) | Modify as shown,Where there is no “torch” or “flashlight” function, or that function has been disabled, ~~No,~~ a smartphone or a tablet containing an LED to support a camera function is considered ~~a~~ portable or transportable Ex Equipment, as ~~where~~ the integral ~~a build in~~ LED has only an auxiliary function and ~~where~~ the main function of the equipment is not ~~to be~~ a luminaire. Thus, it is not considered as a portable or transportable luminaire and the impact requirements for luminaires, such as footnote b of table 15, are not applicable. However where there is a “torch” or “flashlight” function, or this function is not disabled, the requirements for portable luminaires or handlights, such as footnote b of table 15, are applicable.  | Accepted in principle.The new last sentence is modified as follows:However, where the LED serving as a “torch” or “flashlight”, or this function is not disabled, the requirements for portable luminaires or handlights, such as footnote b of table 15, are applicable to the LED part only. |
| **TC31****WG22** |  |  | **te** | The question asked by the Decision Sheet is whether an LED supporting a camera function is considered a luminaire. The answer to that very specific question is “no”, but maybe it is actually the wrong question. The LED supporting the camera with a “flash” function is not a luminaire. However, that may not be the only function of that LED. Today, many smartphones and tablets include a function where the LED on the rear of the device can also be used as a “torch” or “flashlight” to provide area illumination. If this function is enabled, the LED could be operating as a normal function of the smartphone and this would not be an auxiliary function. When IEC 60079-0, Edition 7, was being developed, the requirements were written to address portable handlights and did not consider this application of a smartphone or tablet.(Continued) |  |  |
| **TC31****WG22** |  |  | **te** | In accordance with the current requirements, for a typical smartphone or tablet, the LED and camera lens on the rear of the device would be subject to the “high” risk of mechanical danger (0.7 kg-m) for portable handlights, but the much larger display screen on the opposite side of the device could be subjected to either the “low” or “high risk of mechanical danger tests for light transmitting parts (0.2 kg-m or 0.4 kg-m) as appropriate.The “low” risk of mechanical impact would only be applicable to the LED and camera lens IF the “torch” or “flashlight” function was not present, or was disabled on the smartphone or tablet. |  |  |
| **TIIS****JP** |  |  | **General** | **We support the draft DS without comments.** |  | **Noted** |
| **UL****US** |  |  |  | UL supports 540/CD. |  | Noted |
| **ULBR** |  |  |  | ULBR supports the datasheet as it is. |  | Noted |