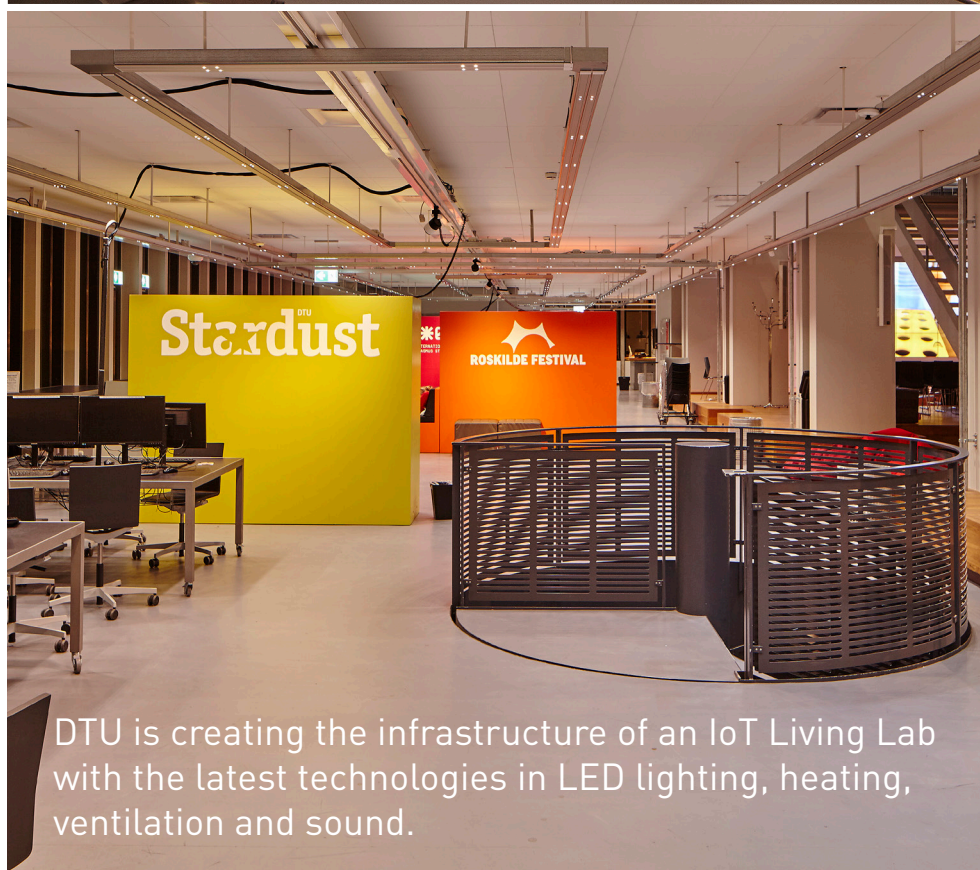


"The new Smart LED solution from LED iBond opens up a range of exciting options for intelligent light control that can be customized for the individual needs of the users".



DTU is creating the infrastructure of an IoT Living Lab with the latest technologies in LED lighting, heating, ventilation and sound.





DTU Smart Library equipped with LED lighting



Today DTU Smart Library acts as a living laboratory where students and scientists spend time and test new technologies. The lighting is no exception. Here, the numerous traditional light fixtures have been replaced with custom made LED luminaires, which vary the colour temperature as well as light intensity depending on user needs and time of the day.

DTU Library – a Living Lab

The library at Technical University of Denmark is the heart of the student environment at Campus Lyngby a bit north of Copenhagen occupying more than one square kilometer. Here the 11.000 students can acquire knowledge, immerse themselves and meet in project teams at all times (24/7).

DTU wanted to apply the latest LED technology, which can be adapted to the needs of the users. In addition, they wanted the users of the library at a later stage to be able to interact/change the lighting in the individual areas, while at the same time achieving significant energy savings. The new Smart LED solution enables a range of exciting options for intelligent light control which can be customized for the individual needs of the users.

As the extensive rebuilding included brand new ceilings and a new ventilation system LED iBond got the opportunity to design an innovative LED solution based on a TRACY linear lighting system, which can be customized to the construction of the building and the needs of the users. The new TRACY luminaire which is now installed at the three floors of the library includes three kilometers of light rails and 7250 LED spots.

Facts

TRACY Spot lighting luminaire
Total 3200 m – 7250 LED spots
CCT: 2700K / 6500K / 4000K (dynamic)
CRI: Ra90+
Installation: October 2017

TRACY LED light is adjusted according to the time of the day

The light installation can be regulated in brightness and colour temperature (Kelvin) during the day. The aim is to create the most suitable conditions in relation to the needs of the users and to follow the daylight throughout the day. This means, that the light is more warm (red) in the morning, becoming more clear (white) at mid-day and again changes to a more warm light at the end of the day.

The luminaires are divided into zones based on where the students and the administrative staff are located. In the zones where students are reading, talking or working in teams, the luminaires are designed in two parallel TRACY lighting rails with two sets of diodes, with different colour temperatures to establish both a natural light and a focused reading light. In the outer zones and the walking zones the lighting rails are mounted individually and are dimmed based on the incoming daylight.

The project establishes an infrastructure for an IoT Living Lab. The focus is to achieve an optimal indoor climate, which covers lighting in the same way as heating, ventilation and sound, and hereby testing the different technologies for an optimal interaction.

For more information
www.ledibond.com

EMPOWER THE FUTURE OF ILLUMINATED IoT

LED iBond empowers the future of illuminated IoT through its intelligent panel system which can transform infrastructure for light, data and electricity – either individually or combined – in one super slim panel.