

# EPIC Workshop on Freeform Optics

24 February 2015, Copenhagen, Denmark

Hosted by EPIC member Delta Optical Thin Film including a company visit to NKT



Freeform optics refers to non-symmetric surface forms in optical components. CNC capabilities for structuring and polishing have advanced significantly allowing production of precision freeform surfaces directly or through compression or injection molding. Improvement in manufacturing methods is still an issue. Yet still metrology for these kinds of surfaces needs to advance further to make this technology mainstream. So advances in metrology are key for growing this business. Today, there is a freeform think tank that is working to elaborate a robust and universal way of defining and describing these surfaces mathematically, for the benefit of design, manufacturing and measuring. Consensus situates freeform optics, in the near future, as aspheric optics is today.

**Applications may include:** Head Mounted Displays (HMD), Very Wide Angle Imaging, Miniaturizing in-vivo imaging systems, Precision illumination, Etendue Squeezing Illumination Optics.

## Topics:

- Applications and modelling
- Manufacturing
- Metrology

## Session Chairs:

- Andres Cifuentes, Director of Engineering, ASE Optics Europe
- TBD

## 23 February 2015

15:30 Depart from hotel (car-pooling) or meet directly at NKT

16:00-18:00: NKT company presentation and visit.  Blokken 84, DK-3460 Birkerød

18:00-18:30: NKT Reception

19:00-21:00: Delegate Dinner at First Marina Hotel, Vedbæk Strandvej 391, 2950 Vedbæk

Suggested hotel (if complete, contact EPIC for alternative options)

### **First Marina Hotel**

Tel +45 45 89 17 11 - [marina@firsthotels.dk](mailto:marina@firsthotels.dk)

<http://www.firsthotels.com/Our-hotels/Hotels-in-Denmark/vedbaek/First-Hotel-Marina/>



Transportation tip: There is a direct train from the airport till the Hotel First Marina that takes 44 minutes.

**24 February 2015** – Workshop hosted by Delta Optical Thin Film  Venlighedsvej 4, 2970 Hørsholm

08:00 Depart Hotel First Marina (car-pooling)

08:30-09:00 Registration and Welcome Coffee at Delta Optical Thin Film

09:00-13:30 Workshop presentations and discussion

11:00-11:30 Coffee Break

13:30 Lunch and Company Visit

15:30 End

## **Participation Fee** (covers partially the direct cost of organizing the event)

- EPIC members: 100 EUR / End-users: 100 EUR + VAT
- Potential EPIC members first time attending: 100 EUR + VAT
- Non-members: 350 EUR + VAT

**Sponsors needed for coffee break 300 EUR – lunch 500 EUR – dinner 700 EUR**

## **ABOUT THE EVENT HOSTS**



**NKT Photonics** is a leading supplier of photonics crystal fibers and fiber lasers deployed in both commercial and scientific markets primarily within imaging, remote sensing and material processing. The products include pulsed lasers, such as supercontinuum sources (SuperK), ultra low noise DFB fiber lasers (Koheras) and a wide range of specialty fibers (Crystal Fibre). NKT Photonics is ISO 9001:2008 certified. [www.nktphotonics.com](http://www.nktphotonics.com)



**Delta Optical Thin Film A/S** is a world-leading manufacturer of optical thin film filters with more than fifty years of experience. Through continuous development of new design and production technology Delta Optical Thin Film helps the world's leading manufacturers of diagnostic and analytical instruments in setting new standards. With its unique and advanced optimisation software to match customers' particular optical specifications, Delta Optical Thin Film ensures a fast and efficient design process. Delta Optical Thin Film fluorescence filters and Linear Variable Filters are used in demanding applications such as fluorescence microscopy, spectroscopy, flow cytometry, wavelength selectors, high-performance monochromators, biomedical laser systems, Point of Care (PoC) instruments, image transferring systems, colour separation systems and optical coherence tomography. [www.deltaopticalthinfilm.com](http://www.deltaopticalthinfilm.com)



EPIC is the industry association that promotes the sustainable development of organisations working in the field of photonics in Europe. We foster a vibrant photonics ecosystem by maintaining a strong network and acting as a catalyst and facilitator for technological and commercial advancement. EPIC publishes market and technology reports, organizes technical workshops and B2B roundtables, coordinates EU funding proposals, advocacy and lobbying, education and training activities, standards and roadmaps, pavilions at exhibitions. [www.epic-assoc.com/membership](http://www.epic-assoc.com/membership)



**Transport:** There is a direct train from the airport till Vedbæk that takes 44 minutes, the hotel is then 3 minutes walk. You can check the train schedule on [www.rejseplanen.dk](http://www.rejseplanen.dk)

**Hotel:** Suggested Hotel, if complete or unreasonable price, contact EPIC for alternative options:

**First Marina Hotel:** Vedbæk Strandvej 391, 2950 Vedbæk

**NKT:** Blokken 84, DK-3460 Birkerød

**Delta Optical Thin Film:** Venlighedsvej 4, 2970 Hørsholm

**Organizer:** Carlos Lee – Mobile +32 473300433 – [carlos.lee@epic-assoc.com](mailto:carlos.lee@epic-assoc.com)