



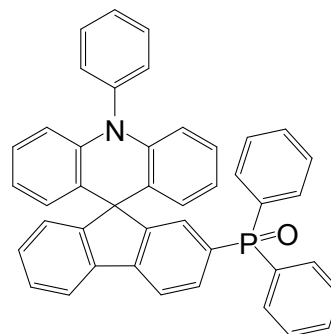
## Orthogonal Molecular Structure for Better Host Material in Blue Phosphorescence and Large OLED White Lighting Panel

### Product Specifications

#### LT-N4108 POSTF 2'-(diphenylphosphoryl)-10-phenyl-10H-spiro[acridine-9,9'-fluorene]

|                          |  |
|--------------------------|--|
| <b>CAS No.</b>           | 1647050-25-6                                     |
| <b>Grade</b>             | Sublimed, >99% (HPLC)                            |
| <b>Formula</b>           | C <sub>43</sub> H <sub>30</sub> NOP              |
| <b>Molecular Weight</b>  | 638.65 g/mole                                    |
| <b>Absorption</b>        | 280, 325 nm(in CH <sub>2</sub> Cl <sub>2</sub> ) |
| <b>Photoluminescence</b> | 435 nm(in CH <sub>2</sub> Cl <sub>2</sub> )      |
| <b>HOMO/LUMO</b>         | 5.34 eV/ 1.71 eV                                 |
| <b>TGA</b>               | > 250 °C (0.5 % weight loss)                     |

Reference : Adv. Funct. Mater. 2015, 25, 645-650



### Features

- The high-efficiency blue phosphorescence devices with external quantum efficiencies above 25% are developed using a new bipolar host material, POSTF, which is constructed in orthogonal molecular structure with a spiro-core.
- PHOLED device with FlrPic as dopant, the device can achieve power efficiency of 50.5 lmW<sup>-1</sup>, EQE of 26.8%.
- The large-size white lighting prototype device with active area of 150 mm × 150 mm. In this device, a PE of 63.9 lmW<sup>-1</sup> was achieved. By applying state-of-the-art out-coupling technique, this PE can be further improved as high as 75.9 lmW<sup>-1</sup>.

### Device Application

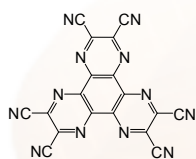
#### The Best Blue Device :

ITO/HAT-CN(10 nm)/ TAPC(45 nm)/POSTF:FlrPic (15 vol%, 20 nm)/TmPyPB (40 nm)/Liq(2 nm)/Al(100 nm).

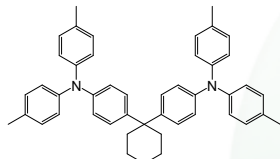
#### The Best White Three Color-based Device :

ITO/HAT-CN(10 nm)/TAPC(45 nm)/POSTF:15 vol% FlrPic:1 vol% PO-01(20 nm)/TmPyPB (40 nm)/ Liq (2 nm)/Al.

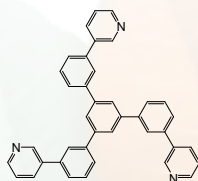
Related products from Lumtec :



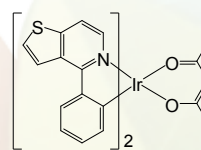
LT-N221 HAT-CN



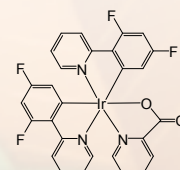
LT-N137 TAPC



LT-N863 TmPyPB



LT-N748 PO-01



LT-E607 FlrPic