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## PCN20-2019 - UPDATE: Epoxy Change for all NanEye 2D Camera Modules & Connector

Dear Customer,

ams AG is planning to change the epoxy of the Naneye 2D camera module & connector from Epotek 320NC-2 to Epotek TJ2139-LH Black.

### Change Justification and Description

During reliability testing, ams AG has observed failures in the thermal humidity test (85C/85% RH) of the camera modules. This failure does not appear on the connector. The failure mode that was observed is an open electrical contact due to corrosion in the RDL resulting in a failing functionality of the tested product. Storage under high temperature and high humidity may eventually lead to a failure of the camera modules.

The root cause investigation has shown that the current epoxy plays a major role in the RDL corrosion on the camera module due to its low glass transition temperature, therefore we want to change to the new epoxy, which has high glass transition temperature. This change is also applicable to the connector since the epoxy is used on both camera module and connector.

### Risk Assessment

A risk assessment has been carried out where major risks have been identified and mitigated accordingly. Details will be shared to the customer upon request.

### Impact on Product

ams AG expects that the corrosion will be addressed by this epoxy change.

Bankverbindungen/  
Bankaccounts  
UniCredit Bank Austria AG, Graz

IBAN EUR AT28 1200 0763 1316 1100  
BIC BKAUATWW  
IBAN USD AT60 1200 0763 1316 1106

Firmenbuchgericht Graz  
Firmenbuch Nr. FN 34109k

DVR 0420352  
UID/VAT ATU 28560205



### Impact on Material

The bill of materials (BOM) will be updated accordingly.

### Impact on Reliability

By changing the epoxy to Epotek TJ2139-LH Black, the RDL corrosion of the camera module is avoided.

### Impact on Packing & Shipment

After this change, there is no more need to deliver the product in a moisture barrier bag (MBB) with desiccant.

### Implementation Date and Schedule

ams AG plans to implement this change by end of December 2019 (after the qualification exercise is completed).

### Traceability

The ams ERP system assures the traceability by batch ID.

### The following products will be affected

Material No	Material Description
301170005	NE2D_RGB_FOV90F4.0_2m FT SE
301170006	NE2D_RGB_FOV90F6.0_2m FT SE
301170007	NE2D_RGB_FOV90_F2.7_2m FT SE
301170012	NE2D_RGB_FOV90F4.0_NP_2mFT SE
301170016	NE2D_RGB_FOV90_F2.7_Stereo FT SE
301170017	NE2D_RGB_FOV90_F2.7_NB_2m FT SE
301170022	NE2D_RGB_FOV90F6.0_NB_2m FT SE
301170026	NE2D_RGB_NP_2m FT SE
301170029	NE2D_RGB_FOV90_F2.7_LEDRing FT SE
301170030	NE2D_RGB_FOV160_F2.4_2m FT SE
301170037	NE2D_RGB_FOV120_F2.8_0.4m FT SE
301170039	NE2D_RGB_FOV120_F4.0_0.5m FT SE
301170041	NE2D_RGB_FOV120_F4.0_2m FT SE
301170044	NE2D_RGB_FOV120_F4.0_1.1m FT SE



301170054	NE2D_RGB_FOV120_F2.8 SE
301170055	NE2D_B&W_FOV160_F2.4_2m FT SE
301170061	NE2D_RGB_FOV90_F2.7_1.78mSh FT SE
301170065	NE2D_RGB_FOV90_F2.7_0.3m FT SE
301170067	NE2D_RGB_FOV90_F2.7_1.1m FT SE
301170085	NE2D_RGB_FOV160_F2.4_3m_DP FT SE
301170088	NE2D_RGB_FOV120_F2.8_3m_DP FT SE
301170089	NE2D_RGB_FOV90F4.0_8cm FT SE
301170090	NE2D_RGB_FOV90_F2.7_3m FT SE
301180003	NE2D_B&W_FOV120_F2.8_2m FT SE
301180004	NE2D_B&W_FOV90_F4.0 FT SE
301180005	NE2D_B&W_2m FT SE
301180006	NE2D_B&W_FOV90_F2.7_NB_2m FT SE
301180009	NE2D_B&W_FOV90_F2.7_2m FT SE
301180010	NE2D_B&W_FOV90F6.0_3m FT SE
301190004	NE2D_RGB_F2.8_FOV120_SGA FT SE
301190005	NE2D_RGB_FOV90_F6.0_SGA FT SE
301190011	NE2D_RGB_F2.7_FOV90_SGA FT SE
301190014	NE2D_RGB_FOV90_F4.0_SGA FT SE
301200005	NE2D_B&W_FOV90_F4.0_SGA FT SE
301200007	NE2D_B&W_F2.7_FOV90_SGA FT SE
301200008	NE2D_B&W_F2.8_FOV120_SGA FT SE
302630001	NE2D_RGB_FOV120_F2.8_3m FT SE

Please be advised that unless we receive your written refusal concerning this change notification within 30 days, the change notification shall be deemed accepted. If you do have further questions, please do not hesitate to contact ams at any time.

Best regards,

Peter Crabbe  
ams AG  
Director Operations CIS