No. 3, Gongye E. 3rd Road, Hsinchu Science Park, Hsinchu 30075, Taiwan
TEL：886-3-565-8800

Lextar

PU88S31

Product Specification

Updated on 2019/01/21

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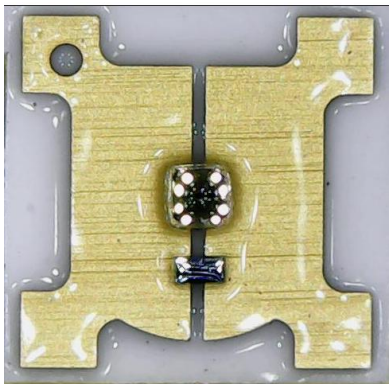
Approval Sheet

PU88S31 UV LED Package
Product Specification

RoHS

Product	UVC 3535 Ceramic
Part Number	PU88S31
Customer	
Issue Date	2019/01/21



Feature

- ✓ Dice Technology : AlGaN
- ✓ Environmental friendly ; RoHS compliance

Applications

- ✓ Sterilization
- ✓ Water purification
- ✓ Air purification

MAKER			CUSTOMER
Prepared	**Checked**	**Approved**	Approver
Alu Lin	**Howard.ch.lin**	**KH Shen**	

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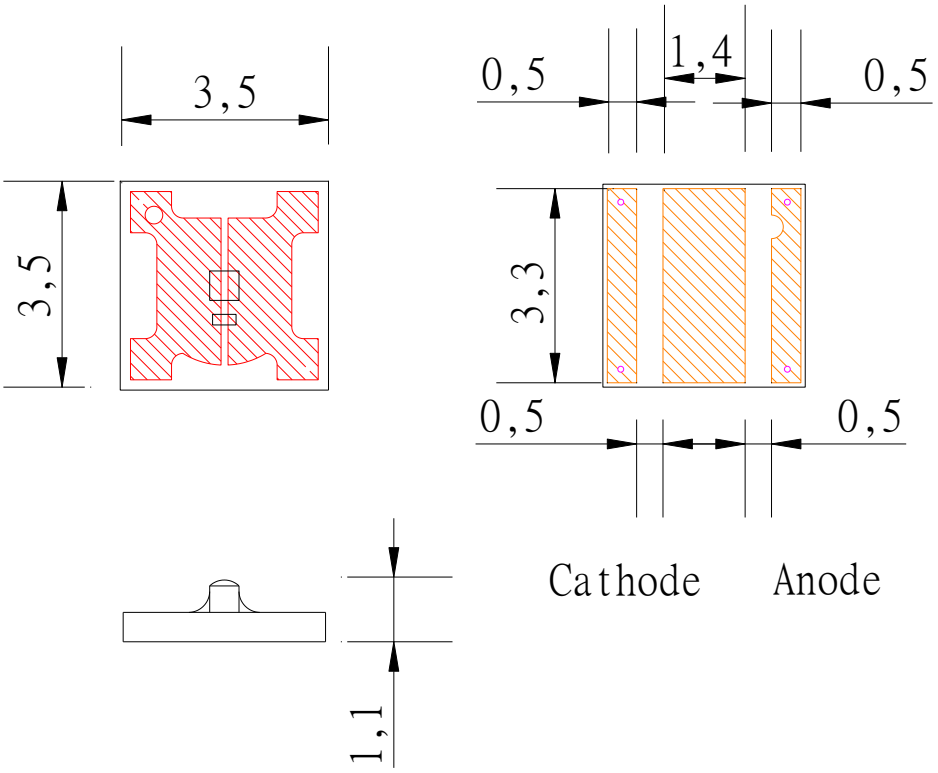
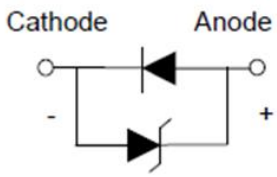
Outline Dimension



Internal Circuit



*. Tolerance:±0.15mm

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Opto-Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage*	V_F	I_F = 30mA	--	5.2	--	V
Wavelength**	W_P	I_F = 30mA	--	280	--	nm
Junction Temperature***	deg.C	I_F = 30mA	--	--		℃
View Angle	θ	I_F = 30mA	--	140	--	deg
Radiant Power	Po	I_F = 30mA		3.5		

(1).The Forward Voltage tolerance is ±0.1V

(2).Peak Wavelength tolerance is ±5nm

(3).Thermal resistance is calculated from junction to solder

(4).The Radiant Power tolerance ±10%

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
DC Forward Current	I_F	30	mA
ESD	V_{ESD}	8000	V
Soldering Temperature*(2)	T_S	260	^oC
Junction Temperature	T_J	65	^oC
Storage Temperature	T_{Stg}	-40~100C	^oC
Operation Temperature	T_{Op}	-10~60	^oC

(1) JEDEC STD-020 latest version compliant.

(2) Proper current rating must be observed to maintain junction temperature below Tj max.

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Wavelength Rank (Ta=25℃)

W_P Rank	Min.	Max.	Unit	Condition
U0270	270	280	nm	I_F=30mA
U0280	280	290	nm	I_F=30mA

Radiant Power Rank (Ta=25℃)

P_O Rank	Min.	Max.	Unit	Condition
01	2.5	3.0	mW	I_F=30mA
02	3.0	3.5	mW	I_F=30mA
03	3.5	4.0	mW	I_F=30mA

Forward Voltage Rank (Ta=25℃)

V_F Rank	Min.	Max.	Unit	Condition
01	5.0	5.5	V	I_F=30mA
02	5.5	6.0	V	I_F=30mA
03	6.0	6.5	V	I_F=30mA
04	6.5	7.0	V	I_F=30mA
05	7.0	7.5	V	I_F=30mA

Bin code definition (for example)

Wp Rank	P_O Rank	V_F Rank
U0280	01	02

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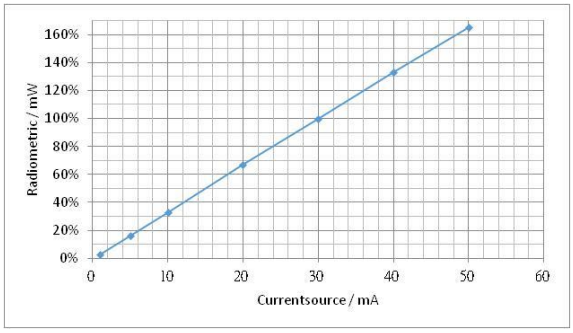
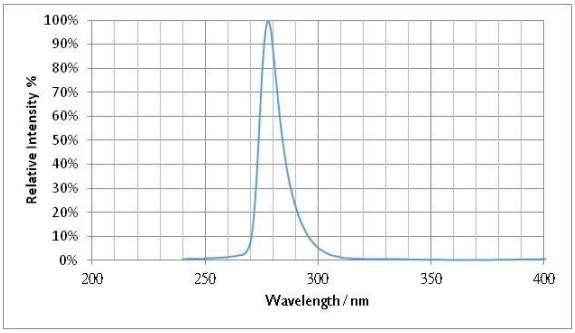
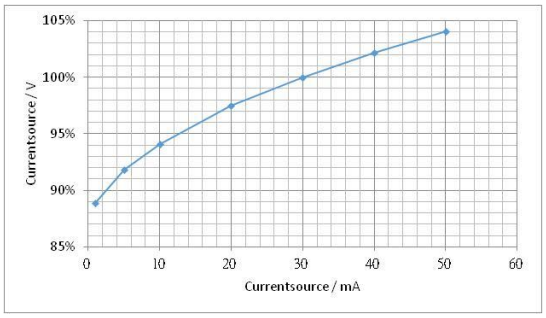
Relative Radiant Flux vs. Forward Current



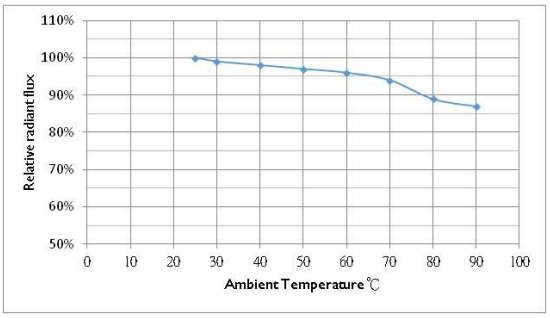
Relative Spectral Distribution vs. Wavelength at 25℃, I_F=30mA



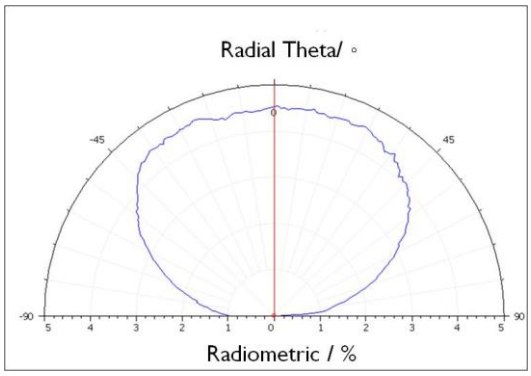
Forward Current vs. Forward Voltage at 25℃



Relative radiant flux vs. Ambient Temperature



Directivity



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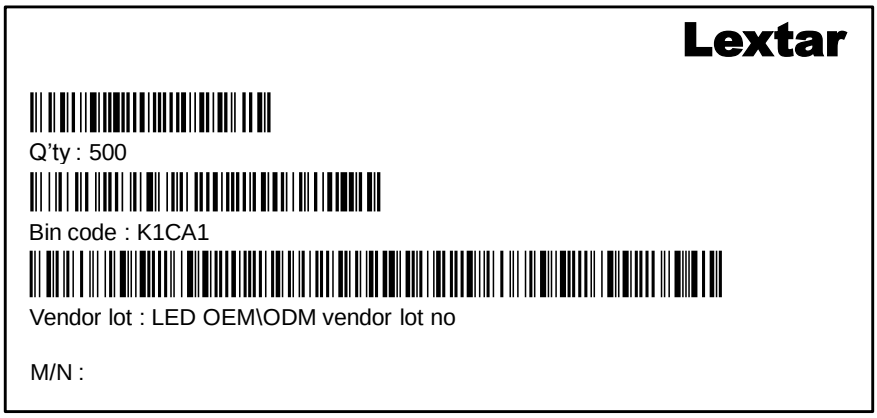
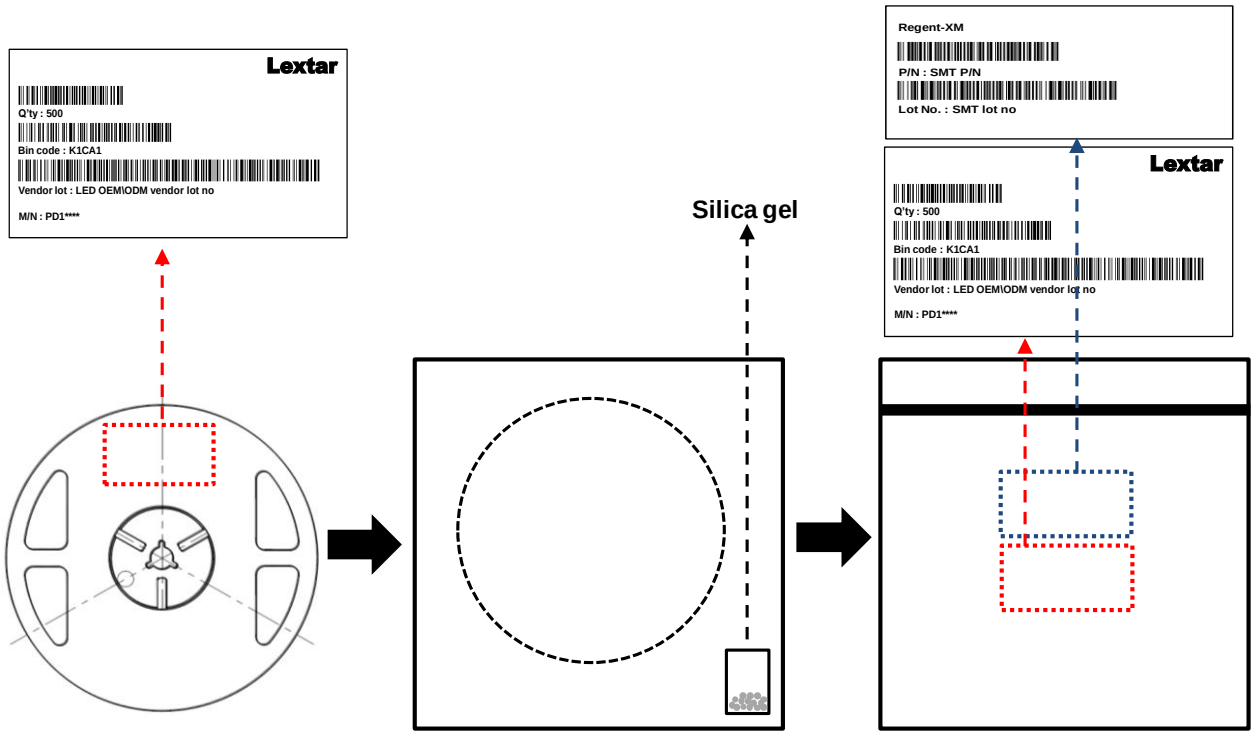
Label



Packing process



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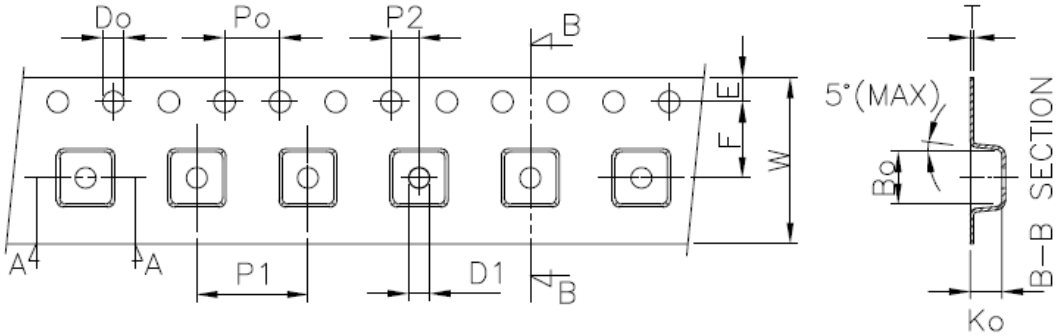
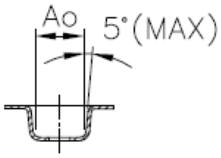
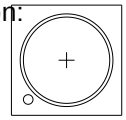
Carrier dimensions(TBD)





A—A SECTION

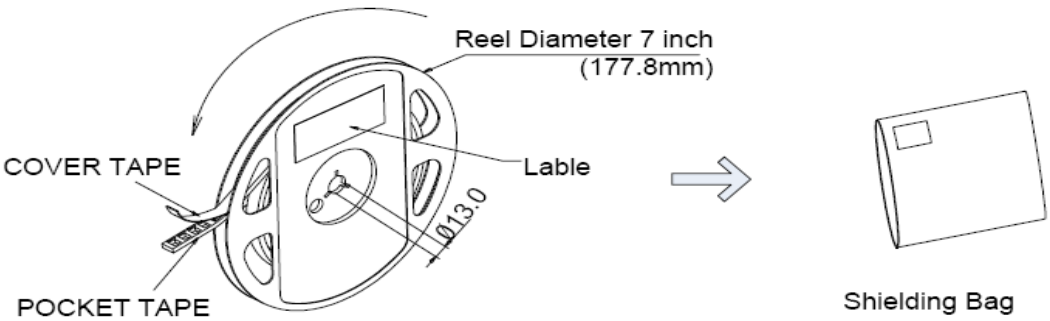
Orientation:



UNIT:mm

Symbol	Ao	Bo	Ko	Po	P1	P2	T
Spec	3.72±0.10	3.72±0.10	TBD	4.00±0.10	8.00±0.10	2.00±0.10	0.25±0.10
Symbol	E	F	Do	D1	W	10Po	--
Spec	1.75±0.10	5.5.±0.05	1.55±0.05	1.50±0.10	12.0±0.30	40.0±0.20	--

USER REEL DIRECTION



7 inch Anti-Static Reel

Max 500pcs/reel

Min 250pcs/reel

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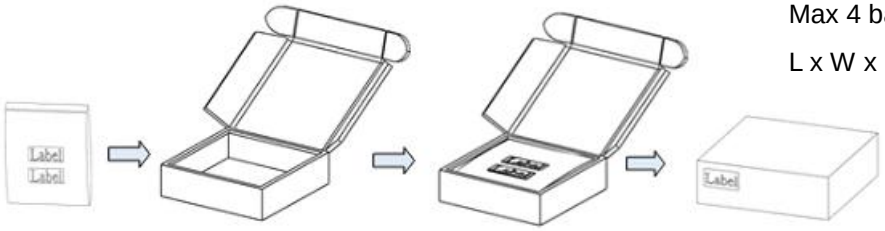
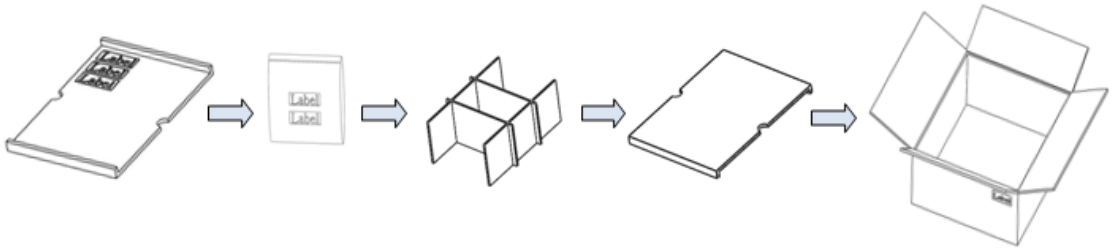
■ Small Box

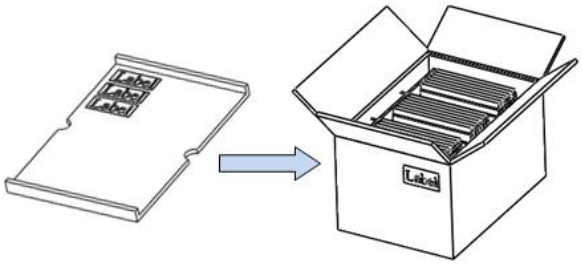


Max 4 bags in 1 inner box

L x W x H =290x240x70mm

■ Medium Box

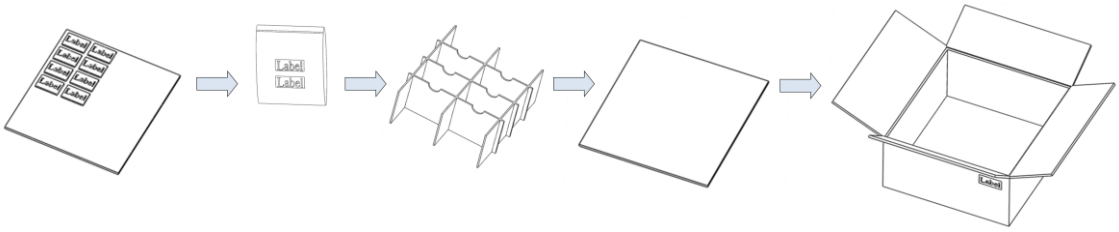


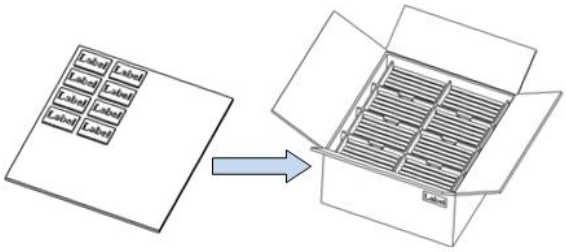


5 inner boxes in one carton

L x W x H =390x310x260mm

■ Large Box





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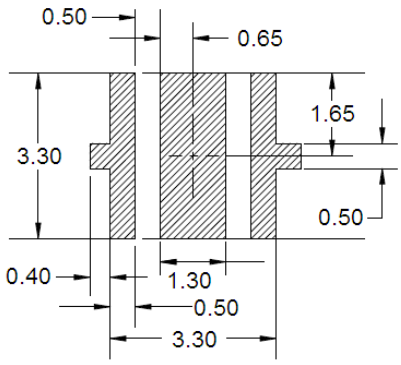
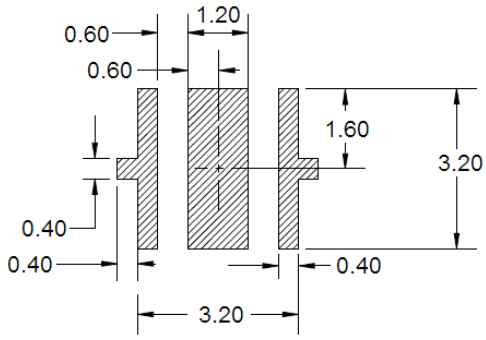
Soldering PAD Design

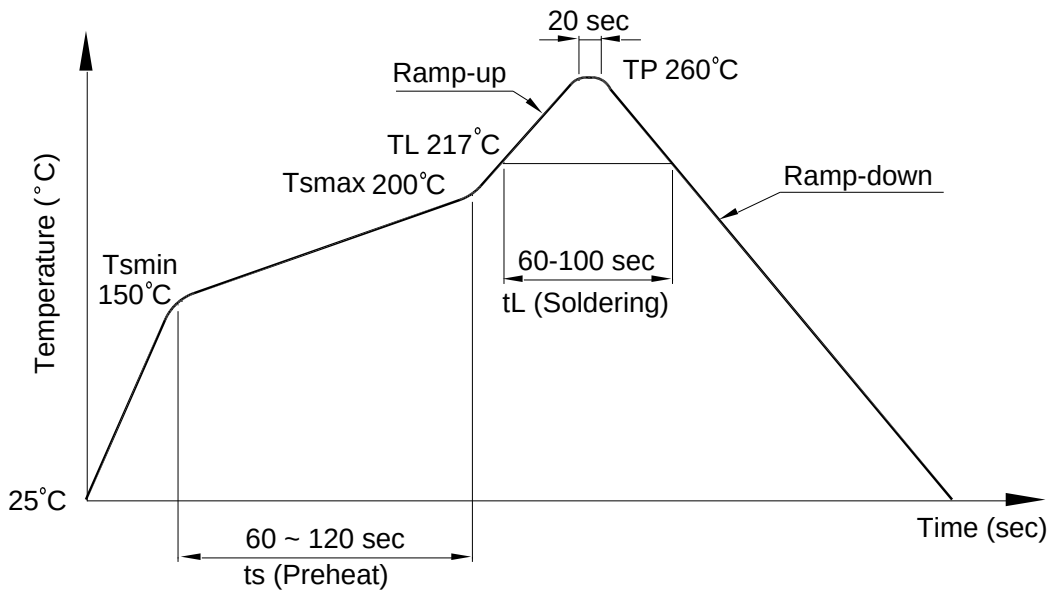


Recommended Solder Pad



Recommended Stencil pattern

Recommended Reflow Soldering Profile (JEDEC-STD-020 latest version compliant)



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Packing

Profile Items	Conditions
Preheat	
-Temperature Min.(T_{Smin})	150˚C
-Temperature Max.(T_{Smax})	200˚C
-Time(Min. to Max.)(t_S)	90±30 sec
Soldering Zone	
-Temperature(T_L)	217˚C
-Time	60~100 sec
Peak Temperature(T_P)	260˚C
Ramp-up rate	3˚C / sec max.
Ramp-down rate	3~6˚C / sec

Note:

1. One time soldering is recommended; do not exceed 3 times reflow process.
2. The recommended peak temperature is 245˚C. The maximum soldering temperature should be controlled under 260˚C.

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