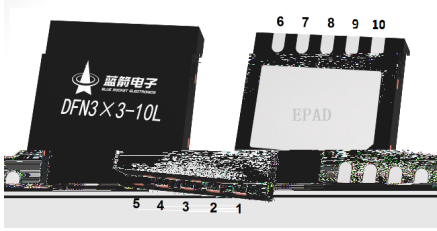


BRCL3120CZV

Rev.A Feb.-2026

/ Pinning



	VDD	

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

/Parameter	/Symbol	/Value	/Unit
V _{DD} input pin voltage	V _{IN}	-0.3 to +8	V
V _{VM} input pin voltage	V _{VM}	-8 to +10	V
Maximum Junction Temperature	T _J	-40 to +145	
Storage Temperature	T _{stg}	-55 to +145	
ESD HBM Mode	ESD	± 4000	V

/ Electrical Characteristics(Unless otherwise specified,Ta=25)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Power supply						
Supply Voltage	V _{DD}		0		6	V
Charger input voltage	V _M		-6		6	V
Detection voltage						
Overcharge Detection Voltage	V _{OCV}		4.25	4.3	4.35	V
Overcharge Release Voltage	V _{OCR}		4.04	4.10	4.16	V
Overdischarge Detection Voltage	V _{ODV}		2.30	2.40	2.50	V
Overdischarge Release Voltage	V _{ODR}		2.90	3.00	3.10	V
Detection current						
Overdischarge Current Detection	I _{OCI}		18	23	28	A
Load Short-Circuiting Detection	I _{SHORT}		30	50	70	A
Overcharge Current Detection	I _{CHA}		14	20	26	A
Static current						
Current Consumption in Normal Operation	I _{OPE}	V _M =0V		3.5	7	A
Current Consumption in Dormancy	I _{PDN}	V _{DD} =1.8V		2	6	A
Pull-up and Pull-down Current from VM						
Internal pull-up current	I _{PU}			14		A
Internal pull-down current	I _{PD}	V _M =1V		14		A
Equivalent FET on Resistance						
Equivalent FET on Resistance	R _{DS}	I _{VM} =1A	6	9.5	11	m

/ Electrical Characteristics(Ta=25)

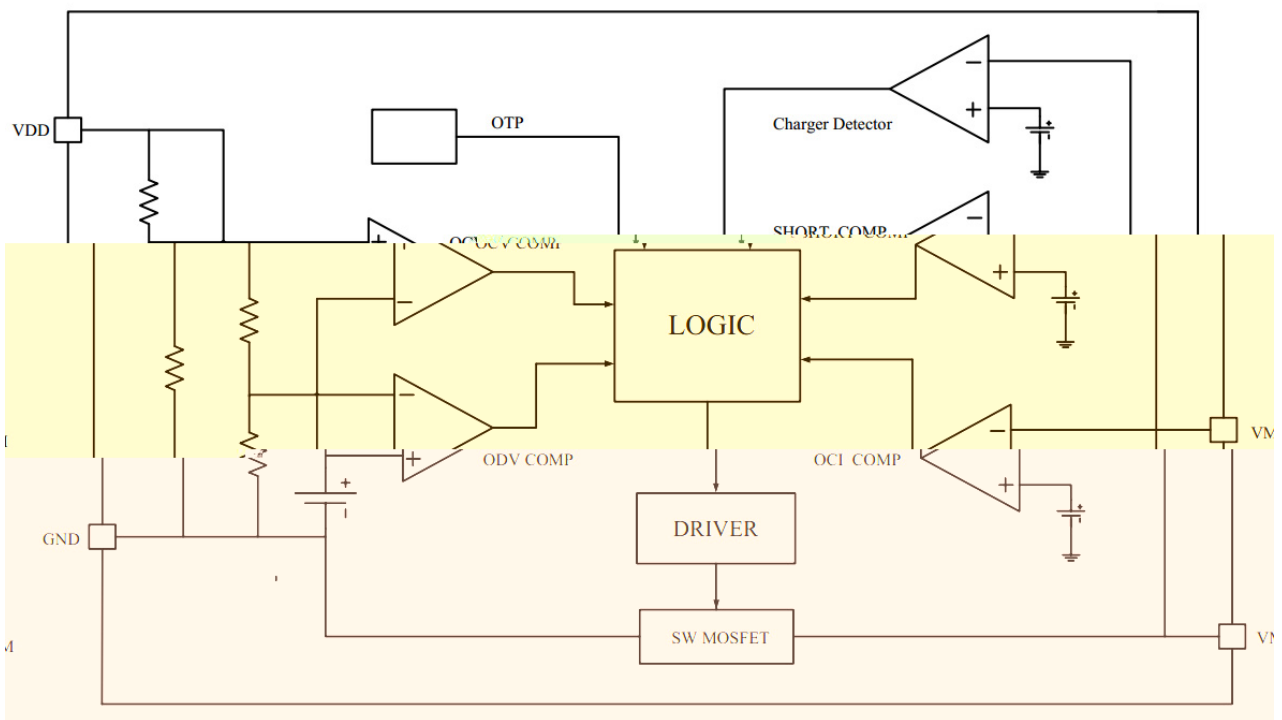
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Over temperature protection						
Over-temperature protection	OTP			145		
Over-temperature protection release temperature	OTPR			120		
Detection delay						
Overcharge Voltage Detection Delay Time	T _{OCV}			100		ms
Overdischarge Voltage Detection Delay Time	T _{ODV}			100		ms
Overdischarge Current1 Detection Delay Time	T _{IOV1}			8		ms
Overdischarge Current2 Detection Delay Time	T _{IOV2}			2		ms
Load Short-Circuiting Detection Delay Time	T _{SHORT}			150		s

* (OTP)

OTPR

*

FunctionI Block Diagram



Functional Description

Normal Operating mode

Overcharge Voltage Condition

Overdischarge Voltage Condition

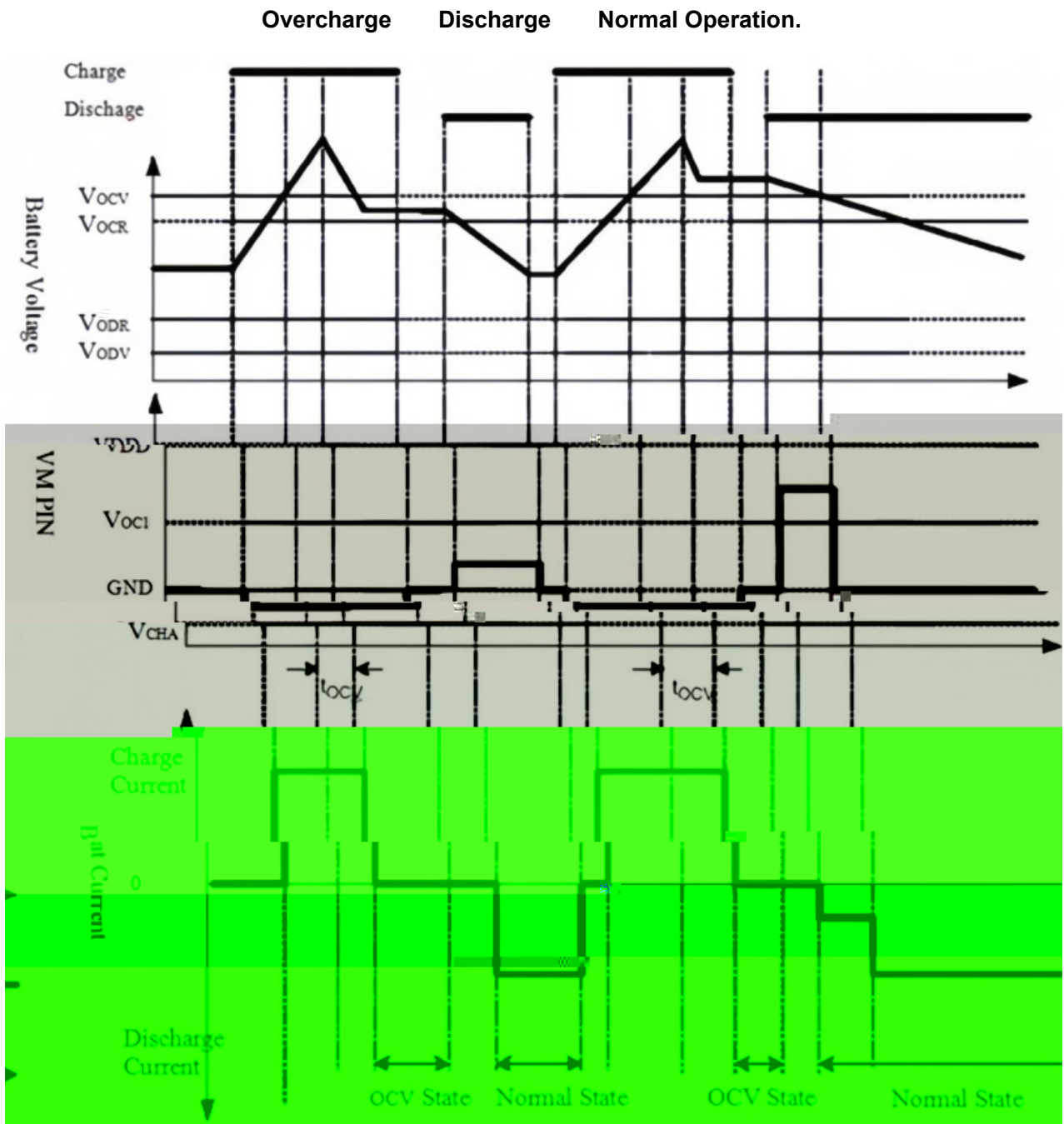
Overdischarge Current Condition

Load Short-circuiting Condition

Charger Detection

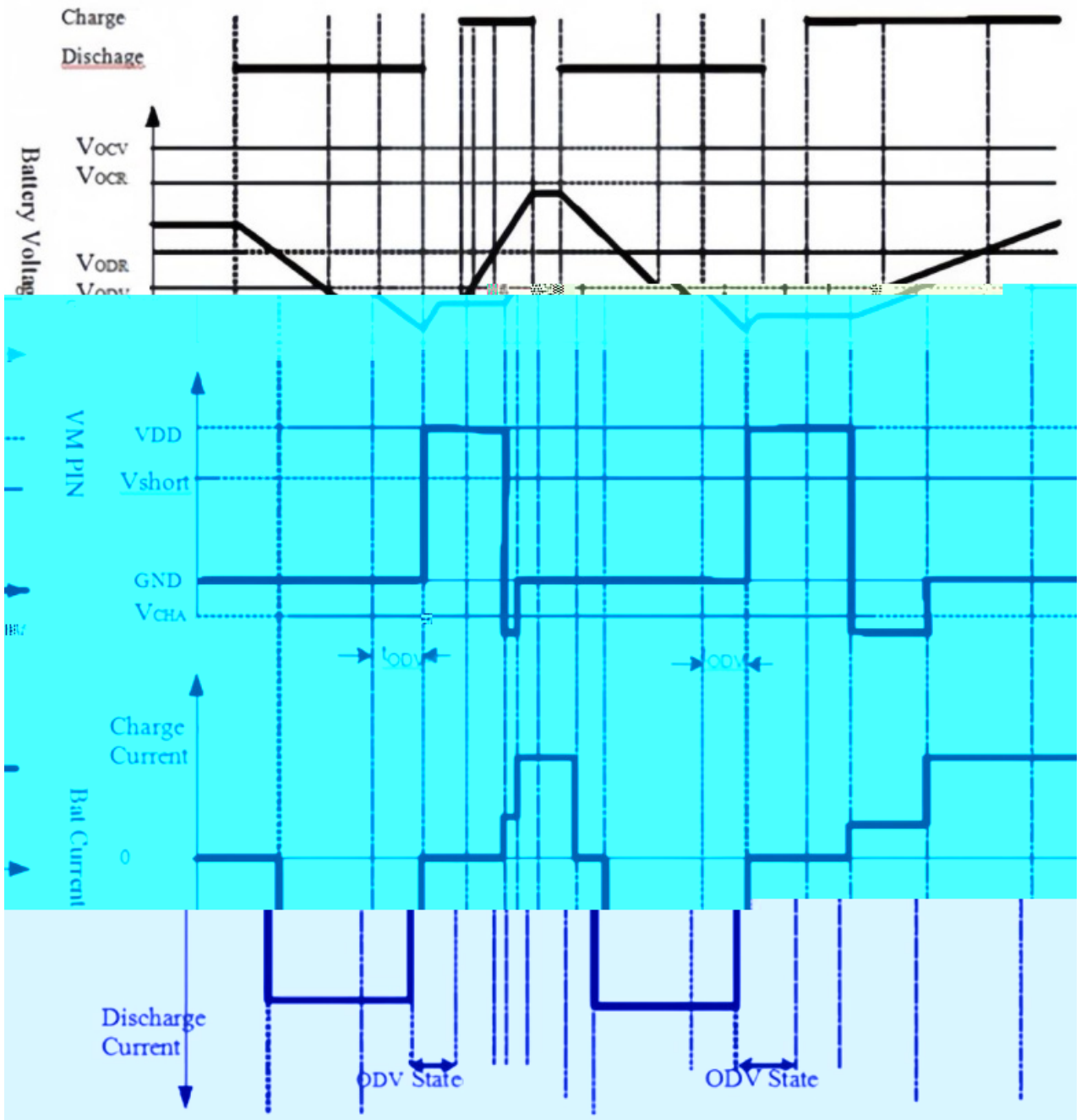
0V Battery Charging Function

Timing Chart



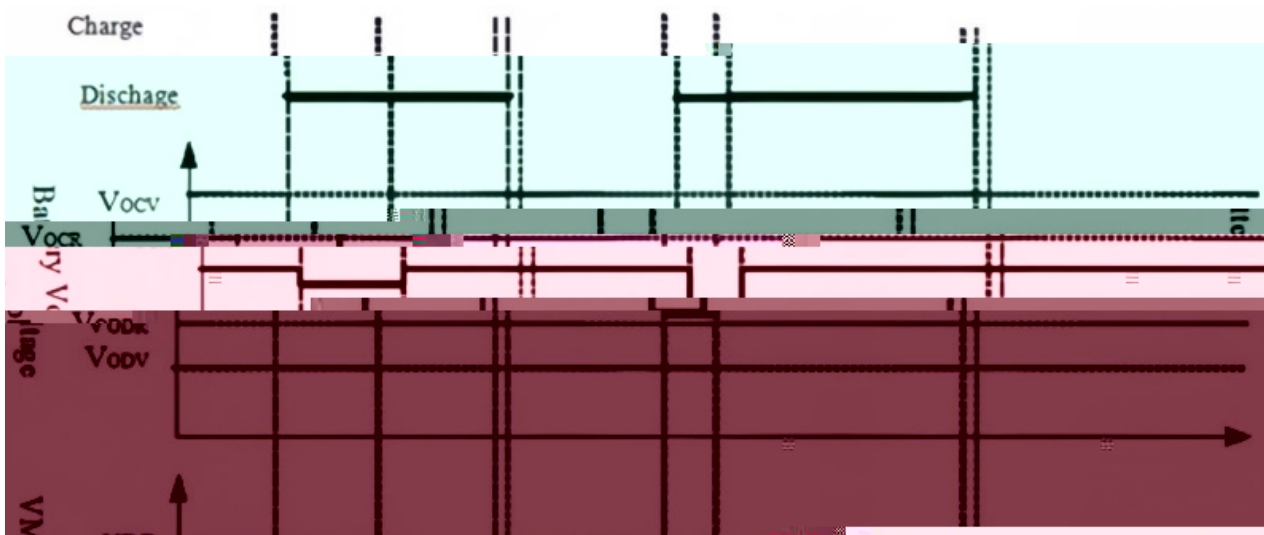
Timing Chart

Overdischarge Charging Normal Operation.



Timing Chart

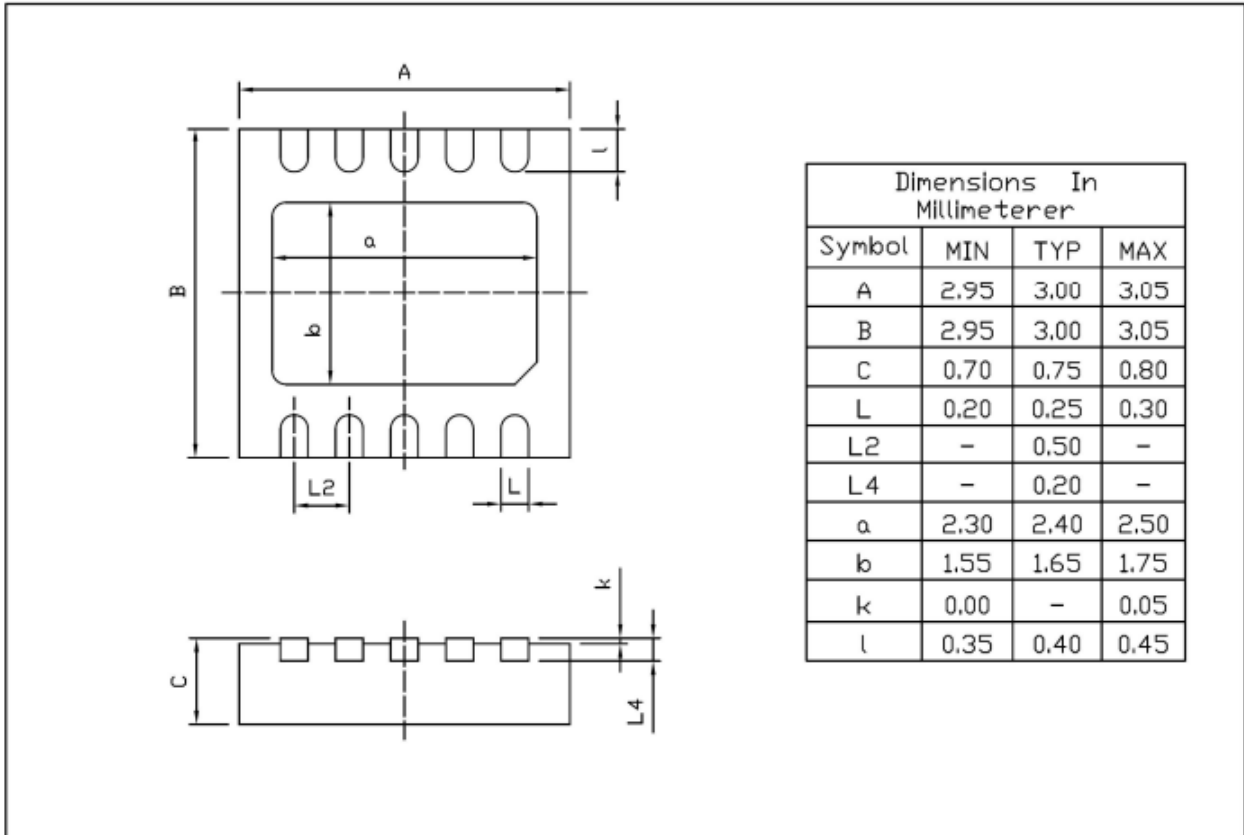
Discharge Overcurrent Normal Operation.



/ Package Dimensions

DFN3X3-10L

Unit:mm

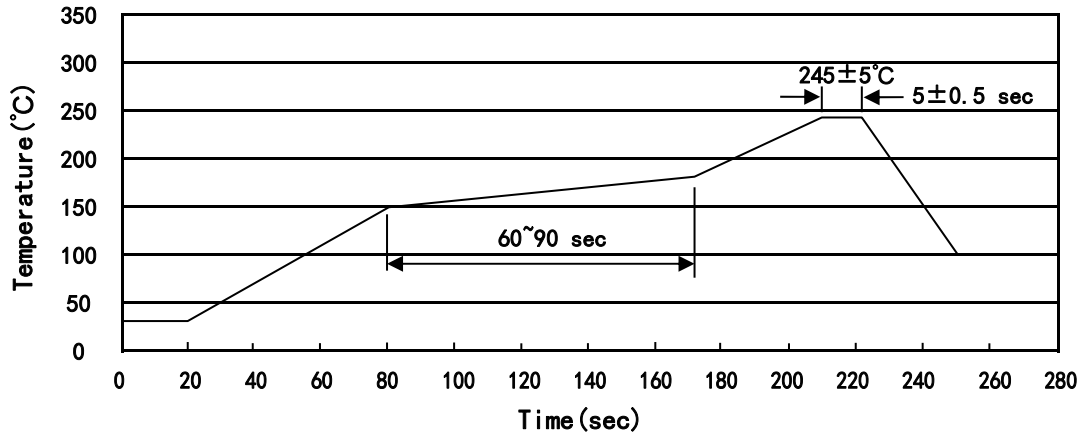


Rev.00 202008

/ Marking Instructions



() /



Note:

- | | | | | | |
|---|-----|-----|----|----------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245 | 5 | 5 | 0.5sec; | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
DFN3×3-10L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366

/ Notices

All information provided in this document is subject to legal disclaimers.