

# $U_4(3).4 \pmod{2}$

	blocks	defect	matrix
$4.G :$	1	11	$140 \times 5$
	2	4	$16 \times 1$
	$3 = \bar{2}$	4	$16 \times 1$
	4	4	$16 \times 1$

<b>Block 1:</b>	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0+}$	$\varphi_{5+}$	$\varphi_{9,0}$
$1_1 = \chi_{1,0}$	1	.	.	.	.
$1_2 = \chi_{1,1}$	1	.	.	.	.
$1_3 = \chi_{1,2}$	1	.	.	.	.
$1_4 = \chi_{1,3}$	1	.	.	.	.
$21_1 = \chi_{2,0}$	1	1	.	.	.
$21_2 = \chi_{2,1}$	1	1	.	.	.
$21_3 = \chi_{2,2}$	1	1	.	.	.
$21_4 = \chi_{2,3}$	1	1	.	.	.
$70_1 = \chi_{3,0+}$	2	.	1	.	.
$70_2 = \chi_{3,1+}$	2	.	1	.	.
$90_1 = \chi_{5,0}$	2	1	1	.	.
$90_2 = \chi_{5,1}$	2	1	1	.	.
$90_3 = \chi_{5,2}$	2	1	1	.	.
$90_4 = \chi_{5,3}$	2	1	1	.	.
$140_1 = \chi_{6,0}$	.	1	.	.	1
$140_2 = \chi_{6,1}$	.	1	.	.	1
$140_3 = \chi_{6,2}$	.	1	.	.	1
$140_4 = \chi_{6,3}$	.	1	.	.	1
$189_1 = \chi_{7,0}$	1	.	1	.	1
$189_2 = \chi_{7,1}$	1	.	1	.	1
$189_3 = \chi_{7,2}$	1	.	1	.	1
$189_4 = \chi_{7,3}$	1	.	1	.	1
$210_1 = \chi_{8,0}$	2	1	1	.	1
$210_2 = \chi_{8,1}$	2	1	1	.	1
$210_3 = \chi_{8,2}$	2	1	1	.	1
$210_4 = \chi_{8,3}$	2	1	1	.	1
$1120_1 = \chi_{9+}$	8	4	4	1	4
$630_1 = \chi_{13,0+}$	2	2	1	1	2
$630_2 = \chi_{13,1+}$	2	2	1	1	2
$420_1 = \chi_{15,0}$	.	1	.	1	1
$420_2 = \chi_{15,1}$	.	1	.	1	1
$420_3 = \chi_{15,2}$	.	1	.	1	1
$420_4 = \chi_{15,3}$	.	1	.	1	1
$560_1 = \chi_{16,0}$	.	2	.	1	2
$560_2 = \chi_{16,1}$	.	2	.	1	2
$560_3 = \chi_{16,2}$	.	2	.	1	2
$560_4 = \chi_{16,3}$	.	2	.	1	2
$729_1 = \chi_{19,0}$	1	1	1	1	3
$729_2 = \chi_{19,1}$	1	1	1	1	3
$729_3 = \chi_{19,2}$	1	1	1	1	3

( <b>Block 1:</b> )	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0+}$	$\varphi_{5+}$	$\varphi_{9,0}$
$729_4 = \chi_{19,3}$	1	1	1	1	3
$20_1 = \chi_{21,0}$	.	1	.	.	.
$20_2 = \chi_{21,1}$	.	1	.	.	.
$20_3 = \chi_{21,2}$	.	1	.	.	.
$20_4 = \chi_{21,3}$	.	1	.	.	.
$112_1 = \chi_{22,0+}$	4	2	1	.	.
$112_2 = \chi_{22,1+}$	4	2	1	.	.
$70_3 = \chi_{24,0}$	2	.	1	.	.
$70_4 = \chi_{24,1}$	2	.	1	.	.
$70_5 = \chi_{24,2}$	2	.	1	.	.
$70_6 = \chi_{24,3}$	2	.	1	.	.
$280_1 = \chi_{25+}$	.	.	.	1	.
$120_1 = \chi_{29,0}$	.	.	.	.	1
$120_2 = \chi_{29,1}$	.	.	.	.	1
$120_3 = \chi_{29,2}$	.	.	.	.	1
$120_4 = \chi_{29,3}$	.	.	.	.	1
$210_5 = \chi_{30,0}$	2	1	1	.	1
$210_6 = \chi_{30,1}$	2	1	1	.	1
$210_7 = \chi_{30,2}$	2	1	1	.	1
$210_8 = \chi_{30,3}$	2	1	1	.	1
$210_9 = \chi_{31,0}$	2	1	1	.	1
$210_{10} = \chi_{31,1}$	2	1	1	.	1
$210_{11} = \chi_{31,2}$	2	1	1	.	1
$210_{12} = \chi_{31,3}$	2	1	1	.	1
$1008_1 = \chi_{32,0+}$	4	2	3	1	4
$1008_2 = \chi_{32,1+}$	4	2	3	1	4
$540_1 = \chi_{34,0}$	.	1	.	1	2
$540_2 = \chi_{34,1}$	.	1	.	1	2
$540_3 = \chi_{34,2}$	.	1	.	1	2
$540_4 = \chi_{34,3}$	.	1	.	1	2
$560_5 = \chi_{35,0}$	.	2	.	1	2
$560_6 = \chi_{35,1}$	.	2	.	1	2
$560_7 = \chi_{35,2}$	.	2	.	1	2
$560_8 = \chi_{35,3}$	.	2	.	1	2
$630_3 = \chi_{36,0}$	2	2	1	1	2
$630_4 = \chi_{36,1}$	2	2	1	1	2
$630_5 = \chi_{36,2}$	2	2	1	1	2
$630_6 = \chi_{36,3}$	2	2	1	1	2
$20_5 = \chi_{40,0}$	.	1	.	.	.
$20_6 = \chi_{40,1}$	.	1	.	.	.

(Block 1:)	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0+}$	$\varphi_{5+}$	$\varphi_{9,0}$
$20_7 = \chi_{40,2}$	.	1	.	.	.
$20_8 = \chi_{40,3}$	.	1	.	.	.
$20_9 = \chi_{40,0}^{*3}$	.	1	.	.	.
$20_{10} = \chi_{40,1}^{*3}$	.	1	.	.	.
$20_{11} = \chi_{40,2}^{*3}$	.	1	.	.	.
$20_{12} = \chi_{40,3}^{*3}$	.	1	.	.	.
$120_5 = \chi_{41,0}$	.	.	.	.	1
$120_6 = \chi_{41,1}$	.	.	.	.	1
$120_7 = \chi_{41,2}$	.	.	.	.	1
$120_8 = \chi_{41,3}$	.	.	.	.	1
$120_9 = \chi_{41,0}^{*3}$	.	.	.	.	1
$120_{10} = \chi_{41,1}^{*3}$	.	.	.	.	1
$120_{11} = \chi_{41,2}^{*3}$	.	.	.	.	1
$120_{12} = \chi_{41,3}^{*3}$	.	.	.	.	1
$140_5 = \chi_{42,0}$	.	1	.	.	1
$140_6 = \chi_{42,1}$	.	1	.	.	1
$140_7 = \chi_{42,2}$	.	1	.	.	1
$140_8 = \chi_{42,3}$	.	1	.	.	1
$140_9 = \chi_{42,0}^{*3}$	.	1	.	.	1
$140_{10} = \chi_{42,1}^{*3}$	.	1	.	.	1
$140_{11} = \chi_{42,2}^{*3}$	.	1	.	.	1
$140_{12} = \chi_{42,3}^{*3}$	.	1	.	.	1
$896_9 = \chi_{43+}$	.	.	2	1	4
$896_{10} = \chi_{43*7+}$	.	.	2	1	4
$280_2 = \chi_{47,0}$	4	1	2	.	1
$280_3 = \chi_{47,1}$	4	1	2	.	1
$280_4 = \chi_{47,2}$	4	1	2	.	1
$280_5 = \chi_{47,3}$	4	1	2	.	1
$280_6 = \chi_{47,0}^{*3}$	4	1	2	.	1
$280_7 = \chi_{47,1}^{*3}$	4	1	2	.	1
$280_8 = \chi_{47,2}^{*3}$	4	1	2	.	1
$280_9 = \chi_{47,3}^{*3}$	4	1	2	.	1
$560_9 = \chi_{48,0+}$	.	2	.	1	2
$560_{10} = \chi_{48,1+}$	.	2	.	1	2
$560_{11} = \chi_{48,0*3+}$	.	2	.	1	2
$560_{12} = \chi_{48,1*3+}$	.	2	.	1	2
$420_5 = \chi_{50,0}$	.	1	.	1	1
$420_6 = \chi_{50,1}$	.	1	.	1	1
$420_7 = \chi_{50,2}$	.	1	.	1	1
$420_8 = \chi_{50,3}$	.	1	.	1	1

(Block 1:)	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0+}$	$\varphi_{5+}$	$\varphi_{9,0}$
$420_9 = \chi_{50,0}^{*3}$	.	1	.	1	1
$420_{10} = \chi_{50,1}^{*3}$	.	1	.	1	1
$420_{11} = \chi_{50,2}^{*3}$	.	1	.	1	1
$420_{12} = \chi_{50,3}^{*3}$	.	1	.	1	1
$540_5 = \chi_{51,0}$	.	1	.	1	2
$540_6 = \chi_{51,1}$	.	1	.	1	2
$540_7 = \chi_{51,2}$	.	1	.	1	2
$540_8 = \chi_{51,3}$	.	1	.	1	2
$540_9 = \chi_{51,0}^{*3}$	.	1	.	1	2
$540_{10} = \chi_{51,1}^{*3}$	.	1	.	1	2
$540_{11} = \chi_{51,2}^{*3}$	.	1	.	1	2
$540_{12} = \chi_{51,3}^{*3}$	.	1	.	1	2
$840_1 = \chi_{54,0}$	4	3	2	1	3
$840_2 = \chi_{54,1}$	4	3	2	1	3
$840_3 = \chi_{54,2}$	4	3	2	1	3
$840_4 = \chi_{54,3}$	4	3	2	1	3
$840_5 = \chi_{54,0}^{*3}$	4	3	2	1	3
$840_6 = \chi_{54,1}^{*3}$	4	3	2	1	3
$840_7 = \chi_{54,2}^{*3}$	4	3	2	1	3
$840_8 = \chi_{54,3}^{*3}$	4	3	2	1	3

$$\begin{aligned} \varphi_{1,0} &= 1_1 \\ \varphi_{2,0} &= 20_1 \\ \varphi_{3,0+} &= 68_1 \\ \varphi_{5+} &= 280_1 \\ \varphi_{9,0} &= 120_1 \end{aligned}$$

Block 2:	$\varphi_{10,0}$
$640_1 = \chi_{17,0}$	1
$640_2 = \chi_{17,1}$	1
$640_3 = \chi_{17,2}$	1
$640_4 = \chi_{17,3}$	1
$640_9 = \chi_{37,0}$	1
$640_{10} = \chi_{37,1}$	1
$640_{11} = \chi_{37,2}$	1
$640_{12} = \chi_{37,3}$	1
$640_{17} = \chi_{52,0}$	1
$640_{18} = \chi_{52,1}$	1
$640_{19} = \chi_{52,2}$	1
$640_{20} = \chi_{52,3}$	1
$640_{21} = \chi_{52,0}^{*15}$	1
$640_{22} = \chi_{52,1}^{*15}$	1
$640_{23} = \chi_{52,2}^{*15}$	1
$640_{24} = \chi_{52,3}^{*15}$	1

$$\varphi_{10,0} = 640_1$$

<b>Block 3:</b>	$\varphi_{11,0}$
$640_5 = \chi_{18,0}$	1
$640_6 = \chi_{18,1}$	1
$640_7 = \chi_{18,2}$	1
$640_8 = \chi_{18,3}$	1
$640_{13} = \chi_{38,0}$	1
$640_{14} = \chi_{38,1}$	1
$640_{15} = \chi_{38,2}$	1
$640_{16} = \chi_{38,3}$	1
$640_{25} = \chi_{53,0}$	1
$640_{26} = \chi_{53,1}$	1
$640_{27} = \chi_{53,2}$	1
$640_{28} = \chi_{53,3}$	1
$640_{29} = \chi_{53,0}^{*15}$	1
$640_{30} = \chi_{53,1}^{*15}$	1
$640_{31} = \chi_{53,2}^{*15}$	1
$640_{32} = \chi_{53,3}^{*15}$	1

$$\varphi_{11,0} = 640_2$$

<b>Block 4:</b>	$\varphi_{12,0}$
$896_1 = \chi_{20,0}$	1
$896_2 = \chi_{20,1}$	1
$896_3 = \chi_{20,2}$	1
$896_4 = \chi_{20,3}$	1
$896_5 = \chi_{39,0}$	1
$896_6 = \chi_{39,1}$	1
$896_7 = \chi_{39,2}$	1
$896_8 = \chi_{39,3}$	1
$896_{11} = \chi_{55,0}$	1
$896_{12} = \chi_{55,1}$	1
$896_{13} = \chi_{55,2}$	1
$896_{14} = \chi_{55,3}$	1
$896_{15} = \chi_{55,0}^{*3}$	1
$896_{16} = \chi_{55,1}^{*3}$	1
$896_{17} = \chi_{55,2}^{*3}$	1
$896_{18} = \chi_{55,3}^{*3}$	1

$$\varphi_{12,0} = 896_1$$